S. HRG. 101-520

THE DEFENSE PRODUCTION ACT AMENDMENTS OF 1989

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

THE INDUSTRY'S ABILITY TO MEET DEFENSE NEEDS FOR INNOVATION AND PRODUCTION

NOVEMBER 17, 1989

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CONTENTS

FRIDAY, NOVEMBER 17, 1989

	Page
Opening statement of Senator Dixon	1
Opening statement of Senator Bond	65
Opening statement of Chairman Riegle	70
Prepared statement	112
Opening statement of Senator Heinz	112
Senate bill S. 1379	205

WITNESSES

John R. Kasich, Member, U.S. House of Representatives, Ohio	2
Prepared statement	8
Gen. John R. Guthrie, U.S. Army (Ret.), formerly, Commander, U.S. Army Materiel Command	16
Global economy	17
Broaden the production base	18
Prepared statement	19
Robert B. Costello, formerly, Undersecretary of Defense (Acquisition), Hudson Institute, Indianapolis, IN	25
European concern	26
Prepared statement	28
Lawrence J. Korb, formerly, Assistant Secretary of Defense (Installations and Logistics) The Brookings Institution, Washington, DC	46
Decline in defense spending	46
Dependence on foreign sources	47
Prepared statement	49
Panel discussion:	
Inventory of needs	54
Offsets	55
Reciprocity	56
Effects of offsets and coproduction	57
Tax benefits	58
One central policy	59
Industrial competitiveness/industrial policy	62
Manufacturing technology	64
Government constraints	69
Albert W. Moore, president, National Machine Tools Builders Association (NMTBA), McLean, VA	72
Prepared statement	75
I. Introduction	76
II. Status of the machine tool industry	76
III. The Defense Production Act of 1950	77
IV. S. 1379 establishes the Defense Production Act Fund	78
V. S. 1379 strengthens antitrust protection under the DPA	79
VI. S. 1379 monitors offsets	79
VII. Conclusion	80
Jefferson Z. Amacker, president and chief executive officer, Leach Corp., representing the American Electronics Association	81
A national plan must be developed	82
Fixed price development contracts	83
Foreign suppliers	84
Prepared statement	86

Page

Paul J. Gross, chairman, Proprietary Industries Association, Glendale, CA..... 97
Defense innovative subcontractors 97
Complex regulatory structure..... 98
Prepared statement 100
Panel discussion: Exon-Florio provisions..... 110

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

Statements of:
Committee of American Ammunition Manufacturers..... 114
Bethlehem Steel Corp., Roger P. Penny, senior vice president, operations.. 121
National Tool and Machining Association, Matthew B. Coffey, president... 123
"Bolstering Defense Industrial Competitiveness," a report to the Secretary of Defense by Under Secretary of Defense (Acquisition), July 1988.. 137

THE DEFENSE PRODUCTION ACT AMENDMENTS OF 1989

FRIDAY, NOVEMBER 17, 1989

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 9:30 a.m. in room SD-538 of the Dirksen Senate Office Building, Senator Alan J. Dixon presiding.

Present: Senators Dixon, Heinz, Bond, and Riegle.

OPENING STATEMENT OF SENATOR DIXON

Senator DIXON. Ladies and gentlemen, we are going to promptly begin this hearing.

Today we begin a hearing on S. 1379, the Defense Production Act Amendments of 1989. The purpose of this hearing is to provide the opportunity to receive detailed comments on the legislation before us. The chairman of this committee, my colleague Mr. Riegle, has provided the leadership in guiding our committee's assessment of the condition of our nation's industrial and technology base to support national defense. As reflected in the broad oversight hearings conducted by the chairman of this committee during July, industry's ability to meet defense needs for innovation and production are directly linked to its fundamental economic health. In addition, it is also linked to the broad acquisition policies that define the relations between government and its suppliers.

In many ways, those hearings confirmed the findings of an array of recent reports reviewing the current condition of the industrial and technology base. We need only look to the reports of the Defense Science Board, the Office of Technology Assessment, the Air Force Association, and the Center for Strategic and International Studies for a sobering catalog of the problems that confront us.

For those of us eager to move forward the process of shaping and implementing solutions, these assessments and reports were also a fertile source of both broad and specific recommendations. Many of those recommendations have been incorporated into the bill before us today.

S. 1379, which I introduced with Senators Heinz, Shelby, Wirth, and D'Amato as original cosponsors, is designed to modernize the Defense Production Act of 1950 to meet today's challenges, while assuring the continued availability of the authorities that have served the Nation well over the years.

The overriding theme of this legislation is to foster investment in those segments of the Nation's industrial and technological base

that contribute to national security. The bill seeks to reward investment in modern manufacturing technology and processes made by the private sector by recognizing those investments in the process of awarding and administering contracts let by the Department of Defense and other agencies of Government.

S. 1379 seeks to encourage what we have called industry sanctioned consortia, which would permit industry to pool its resources to more effectively compete in the global economy they confront without running afoul of the Nation's antitrust laws. Presently, the act provides much more limited encouragement, with the initiative coming from the Government.

Based on the recommendations of the Defense Science Board, S. 1379 offers an array of recommendations to improve the organizational framework, at the highest levels of Government, to assure the most realistic assessment and integration of military planning, with the capabilities of industry to provide the material to fulfill these defense plans. These should not be viewed as industrial planning councils, but rather as high level forums for essential correlation of planning activities that are already being undertaken. These provisions of the bill create the environment for more effective policy formulation.

At this point let me stop describing what S. 1379 means to me, and let us hear the analysis of the distinguished witnesses waiting to testify. I again wish to commend the chairman of this committee for his leadership on this important item on the committee's agenda for the 101st Congress and pledge my sustained efforts as the committee moves forward.

I look forward with enthusiasm to today's testimony. I am delighted to have here as our first witness my friend, the distinguished Congressman from the 12th District of Ohio, Congressman John Kasich.

John, we are delighted to have you here. Thank you for honoring us with your presence.

STATEMENT OF JOHN R. KASICH, REPRESENTATIVE IN CONGRESS OF THE UNITED STATES FROM THE 12TH DISTRICT OF OHIO

Representative KASICH. Thank you, Mr. Chairman.

I obviously appreciate the opportunity to appear before you today, and let me say at the ontset that I guess Alan Dixon is the kind of a Democrat that—well, you remind me a lot of my father, Senator, from the standpoint that he was a Democrat all of his life and in the great sense of the word. Being able to work with you on the Armed Services Committee has been a privilege and also to have the opportunity to work with you on this issue, which really seems to me to be at the core of America's industrial problems.

Jobs for our people. That is really what it comes down to. I want to commend you for holding the hearing, and I think it is going to be tough because it is difficult to generate interest with our colleagues on an issue like this. But if we can be persistent and consistent, I think that we can make some great strides.

The Defense Production Act represents a framework to address the longstanding problem which is of great concern, the escalating erosion of our defense industrial and technology base.

While this erosion stems from a number of sources, I believe there is one element addressed by S. 1379 that is a major factor in the decline, and it is, the transfer of defense technology, jobs, and capability to foreign competitors as a consequence of offset, coproduction and countertrade requirements, otherwise known as indirect offset.

A number of legislative approaches to this issue have been made during the past few years. I am pleased to note that S. 1379 contains reporting requirements on offset agreements.

I have also, Senator, asked the General Accounting Office to report in a detailed way on the consequences and ramifications of our current offset policy. Other suggestions have ranged from the very stringent Buy American requirement, which you and I are very aware of as we go through the defense bill—and Mr. Traficant always has his amendments on Buy America—to a policy of unrestricted free trade. I don't think that either of these extreme suggestions will solve the problem.

However, I do think a balance can be struck, which will do much to mitigate the transfer of technology and enhance the defense industrial base.

Before offering some solutions to the problem, I believe it is useful to discuss the true impact of offset and coproduction requirements upon U.S. defense contractors, particularly subcontractors.

The problem here is that very few people even understand what offsets are, and what is worse, they really don't care what offsets are or the extent to which they dominate the international defense and aerospace sector.

I am new in this area myself, Senator, and the idea of offsets and coproduction was something that people talked to me about a year or two ago, and I just keep stumbling across the fact that this offset problem is absolutely contributing to the decline of the industrial base, and therefore I am really going to put some effort and direct myself to it. I hope we can get other people as excited as you and I are.

Simply put, a direct offset is a requirement in a contract obligating a defense contractor or the seller to transfer part of the production or assembly of the item to the purchasing country. An indirect offset requires the seller to market the purchasing country's products. This puts American defense companies in the curious position of marketing things like foreign cheese and beer to the detriment of U.S. suppliers.

In other words, if Boeing is going to sell the AWAC's aircraft to Great Britain, Boeing gets put in the position of actually having to market the products of Great Britain in the United States, and Boeing could actually find itself in the position of having to sell British beer inside the United States against U.S. suppliers because of a deal that they make on the AWAC's sale. An offset agreement could amount to over 100 percent of the value of the item we sell to another country.

For instance, the AWAC's sale that I have just mentioned to Great Britain involved an offset to the British of 130 percent of the

value of the aircraft. Imagine that. Obviously, Boeing's short term advantage was purchased at the price of eventually increasing our trade deficit.

So if we sell them an AWAC's and we end up having to buy from them or force Boeing to market in this country 130 percent of the value of that aircraft, it increases our trade deficit for a very short-term gain.

During the last 20 years, offset and coproduction requirements have become a fact of life for manufacturers of defense equipment. Often the offset and coproduction proposals by U.S. defense contractors are just as important as the technical capability of the weapons system which they produce insofar as making foreign sales is concerned.

What do I mean by that?

Well, if it comes down to the F-16 versus the Mirage, everybody in the world knows that a foreigner will want to buy an F-16 but if they can get a very good offset deal which involves the transfer of technology, the foreign government might rather have the offset deal than they would the superior quality item. That is how important it is for countries to be able to acquire this high technology.

The international marketplace has come to expect this level of offset and coproduction participation. At the same time, the U.S. Government has not elected to impose similar requirements upon foreign suppliers of defense material purchased by our Armed Forces. This fundamental difference in policy and approach has led to alarming distortions in the world marketplace for defense material.

Most developed countries have a coherent policy on international trade and global defense marketing. The United States does not.

First and foremost is the foreign government's objective of maintaining or increasing domestic employment.

Second, virtually every other industrial country has a cohesive policy with respect to increasing its domestic defense industrial and technical base. The objective of these policies is to increase indigenous capability and preparedness and thereby reduce dependence on the United States. They don't want to depend on us. They don't want to have to look to us, and everything they are doing is designed to get away from having to depend on us.

In addition, the development of this capability allows industry within these countries to compete for defense and commercial contracts right inside our country and around the world. These policies have given rise to an almost universal requirement for countertrade offset and coproduction. Currently, U.S. weapons system manufacturers offering the greatest offset package generally obtain the contract.

I would like to turn to perhaps the worst aspect of offsets from the U.S. point of view. Offset and coproduction requirements do not remain exclusively with prime contractors. Rather, the requirement for foreign licensing is levied by the prime contractor upon subcontractors who must then transfer a portion of their production, their weapons system technology, or both to manufacturers in the purchasing country.

To the extent that offsets result in an out-flow of technology, the technology involved is that of subcontractors rather than the prime

contractors, who make the original foreign sale. It is therefore subcontractors who are ultimately placed at a competitive disadvantage from offset.

Let me explain exactly what I mean by that. This is the most incredible situation that I have seen in the transfer of technology. What happens is that a contractor, a Boeing, who will sell an AWAC's to Great Britain, will tell a subcontractor on the wing section of the AWAC's he must transfer his technology to a firm in Great Britain. The subcontractor has to give up his technical data, all of his specs and processes to a foreign government. That government then gives that technology to a company in Great Britain, who then sells the wing section of the AWAC's to the British. What you have is you could actually get yourself into a situation where an American subcontractor must transfer its technology to company X in Great Britain, and then it must compete against that company that it just transferred its technology to in order to subcontract on the wing of the AWAC's.

Now, Senator, let me tell you, in 1983 I offered an amendment in the Congress to say that we should have a limit on proprietary rights. Former Under Secretary of Defense Bob Costello understands proprietary rights as well as anybody does.

What happens is, is that companies bid on contracts—first, let's say a microphone stand or, better than that, how about the coffee pot on that airplane that is ending up costing—was it $5,000, or something like that. The company had proprietary rights. Nobody could compete against that company when they sold that item to the government.

I put a bill in that said that after 7 years for a part that is developed with Government money that involves proprietary rights—in other words, the company that had the exclusive right to sell that coffee pot on the airplane and kept proprietary rights on that coffee pot—I said that after 7 years they ought to give up the rights so that other companies in the United States could compete against them.

Do you know what the defense contractors said? You can't do that to us. You can't take our proprietary data rights and give them to somebody else, even if they were developed at Government expense. You can't do that. And they fought like crazy and got Vice President Quayle to fight against it, and they beat the thing down to where the giving up of proprietary rights was only a consideration in the awarding of contracts.

At the same time they fought that, Senator, here they are pressuring their subcontractors to turn high technology, high priority proprietary information over to companies in foreign countries so that they can compete against our business and throw our people out of work. To me it is the height of inconsistency.

The damage from this arrangement has already been done. According to the CSIS study, "Deterrence and Decay: the Future of the U.S. Industrial Base," the number of U.S. firms doing business with DOD has declined from 120,000 to only 40,000 in less than a decade, and we know the consequences of having fewer firms who want to bid contracts. How many were subcontractors pushed out of the business by offsets has not been calculated because the data on this subject has been so sketchy.

However, there is a reason for the lack of data, and I have asked the GAO to study offsets just as you have done and just as is provided for in this bill. Hopefully we are going to get some very good information so that we can take some strong action. But it has become clear to me that it is our responsibility in Congress to address the issue because the executive branch simply doesn't care, and in fact they even come out actively opposed to taking initiatives on offsets.

And this is something that I think Secretary Cheney has got to be made aware of. We have got to change the attitude of this administration. As a Republican, Senator, I will help you in trying to do that.

We are competing in a very tough global marketplace. Foreign defense manufacturers typically enjoy extensive subsidization by their governments. Subsidization can include payment of technology transfer fees as well as the funding of equipment and tooling and sometimes whole factories. Foreign governments often pay prices to their industries which are higher than would be required were products manufactured by the original U.S. sources.

Offset credit under many foreign contracts is based upon quantity and the type of activity which is performed by the foreign producer. However, it is noteworthy that the greatest amount of offset credit is normally awarded for the transfer of high technology.

As I have said, offset requirements are now so pervasive that it is questionable whether U.S. suppliers could compete in the world marketplace without making such commitments. However, I believe these requirements are detrimental to the U.S. industrial base and particularly U.S. defense subcontractors in three principal ways.

First of all, the movement of jobs and technology from the United States to foreign countries has an overall adverse impact, as we all know.

Second, offset requirements lead to the dissemination of technology and development of subsidized foreign competitors.

And, third, U.S. subcontractors must develop defense systems at their own expense. They purchase their own tooling, and they comply with extensive U.S. requirements, which are not uniformly applied to foreign competitors. We have given our competitorsso many advantages it is incredible.

All these factors render U.S. subcontractors increasingly unable to compete in price. Production of defense systems and subsystems by foreign contractors impacts the efficient production rates which would be available to U.S. subcontractors.

So when these subcontractors can't make the sale to foreign countries, when they do sell to the United States we end up having to pay more for it because they are not producing in efficient quantities. So the per unit price of everything that they produce goes up, and we get stuck holding the bag after we have already loaded up the foreign companies with all the technology that our companies held initially.

It is unbelievable.

I don't know exactly what the answer is, Senator. It is part of the reason why I asked for the GAO report. But there are a couple of things that I think we ought to consider.

As a first step, I think we should mandate some framework that would permit subcontractors to negotiate freely with these foreign companies. We should not permit the prime contractors to force these subcontractors to transfer technology.

Under the current situation, if you are a subcontractor for a major defense contractor and they want the foreign sale, you as a subcontractor had better agree to transfer technology or you may not be doing business with the primes anymore. These subcontractors should not be held hostage, and we have got to figure out some framework to prevent that from happening.

Second, we need to refine our techniques for determining whether foreign governments are subsidizing their defense companies. The two-way street of defense trade cannot work over the long run if we must compete in price with subsidized overseas suppliers.

And, finally, reciprocity. It is amazing to me that we allow ourselves to be held hostage by these offset agreements, yet the United States itself has no offset policy.

Now, I was a supporter of several congressional proposals that affected trade. I know that you were a leader in the effort to try to create a level playing field. It just seems remarkable to me, Senator, that in the process of trying to develop some kind of a trade package in the last few years in this Congress that we haven't been able to level out the playing field in the offset area particularly. I think that this hearing is important because it is going to draw attention to an area where we can take positive action. The Congress can take corrective action, and perhaps in the process we can drag the executive branch along with us and we can stem the flow of technology and jobs and the destruction of our industrial base and the destruction of the great Midwest—Illinois and Ohio—from continuing to occur. If we can get to the bottom of this we can propose some unique solutions. I look forward to working with you, and I thank you for your interest in this matter. Over there in the House you've got a friend. We've got to work together to pass something through this Congress.

Thank you very much.

[The complete prepared statement of Representative Kasich follows:]

Statement on

The Defense Production Act

Senate Banking Committee, Subcommittee on International Finance and Monetary Policy

John R. Kasich, 12th District of Ohio

November 17, 1989

I appreciate the opportunity to appear before you today. The Defense Production Act (S-1379) represents a framework to address a longstanding problem which is of great concern, the escalating erosion of our defense industrial and technology base. While this erosion stems from a number of sources, I believe there is one element addressed by S. 1379 that is a major factor in this decline. That element is the transfer of defense technology, jobs and capability to foreign competitors as a consequence of offset, co-production, and countertrade requirements.

A number of legislative approaches to this issue have been discussed during the past few years, and I am pleased to note that S. 1379 contains reporting requirements on offset agreements. Other suggestions range from a very stringent "Buy American" requirement to a policy of unrestricted free trade. I do not believe that either of these extreme suggestions will

solve the problem. However, I do think a balance can be struck which will do much to mitigate the transfer of technology and enhance the defense industrial base.

Before offering some solutions to the problem I believe it is useful to discuss the true impact of offset and co-production requirements upon U. S. defense contractors, particulary subcontrators. The problem here is that very few people even understand what offsets are, or the extent to which they dominate the international defense and aerospace sector.

Simply put, a direct offset is a requirement in a contract obligating the seller to transfer part of the production or assembly of the item to the purchasing country. An indirect offset requires the seller to market the purchasing country's products. This puts American defense companies in the curious position of marketing things like foreign cheese and beer to the detriment of U.S. suppliers. An offset agreement can amount to over 100 percent of the value of the item we sell to another country. For instance, the AWACS sale to Great Britain involved an offset to the British of 130 percent of the value of the aircraft. Obviously, Boeing's short-term advantage was purchased at the price of eventually <u>increasing</u> our trade deficit.

During the last twenty years offset and co-production requirements have become a fact of life for manufacturers of defense equipment. Often, the offset and co-production proposals by U.S. defense contractors are just as important as the technical capablity of the weapon systems which they produce in so far as making foreign sales is concerned. The international marketplace has come to expect this level of offset and co-production participation. At the same time, the United States Government has not elected to impose similar requirements upon foreign suppliers of defense material purchased by our Armed Forces. This fundamental difference in policy and approach has lead to alarming distortions in the world marketplace for defense material.

Most developed countries have a coherent policy on international trade and global defense marketing. The United States does not. First and foremost is the foreign government's objective of maintaining or increasing domestic employment. Second, virtually every other industrial country has a cohesive policy with respect to increasing its domestic defense industrial and technical base. The objective of these policies is to increase indigenous capability and preparedness and thereby reduce the dependence on the U.S. In addition, development of this capbility allows industry within these countries to compete for defense and commercial contracts in the U.S. and elsewhere.

These policies have given rise to an almost universal requirement for countertrade, offset or co-production. Currently, U.S. weapon system manufacturers offering the greatest offset package generally obtain the contract.

Now I would like to turn to perhaps the worst aspect of offsets from the U.S. point of view. Offset and co-production requirements do not remain exclusively with prime contractors. Rather, the requirement for foreign licensing is levied by the prime contrator upon subcontractors who must then transfer a portion of their production, their weapon system technology, or both, to manufacturers in the puchasing country. To the extent that offsets result in an outflow of technology, the technology involved is that of subcontractors rather than the prime contractors who make the original foreign sale. It is therefore subcontractors who are ultimately placed at a competitive disadvantage from offset and co-production requirements.

The damage from this arangement has already been done. According to the CSIS study, Deterrence in Decay: The Future of the U.S. Industrial Base, the number of U.S. firms doing

business with DoD has declined from 120,000 to only 40,000 in less than a decade. How many were subcontractors pushed out of business by offsets has not been calculated, because the data on this subject are so sketchy. However, there is a reason for the lack of data. I have recently asked the GAO to study the offset issue, and their initial response was that it will take them considerable time. The reason, according to GAO, was that the government does such a poor job of tracking offsets. It has become clear to me that it is our responsiblility in Congress to address this issue if the Executive Branch will not. Our future competitiveness depends on it.

We are competing in a very tough global marketplace. Foreign defense manufacturers typically enjoy extensive subsidization by their governments. Subsidization can include payment of technology transfer fees, as well the funding of equipment and tooling and sometimes whole factories. Foreign governments often pay prices to their industries which are higher than would be required were products manufactured by the orginal U.S. sources. Offset credit under many foreign contracts is based upon the quantity, and type of activity which is performed by the foreign producer. It is noteworthy that <u>the greatest amount of offset credit is normally awarded for the transfer of technology</u>.

As I have said, offset requirements are now so pervasive that it is questionable whether U.S. suppliers could compete in the world marketplace without making such commitments. However, I believe these requirements are detrimental to the U.S. industrial base, and particularly U.S. defense subcontractors, in three principal ways. The movement of jobs and technology from the U.S. to foreign countries has an overall adverse impact upon the U.S. economy and the U.S. technology and industrial base. Second, offset requirements lead to the dissemination of technology and the development of subsidized foreign competitors. Third, U.S. subcontractors must develop defense system at their own expense, purchase their own tooling and comply with extensive U.S. government regulations which are not uniformly applied to foreign competitors.

All of these factors render U.S. subcontractors increasingly unable to compete in price. Production of defense systems and subsystems by foreign contractors impacts the efficient production rates which would be available to U.S. subcontractors were such products produced by the original U.S. supplier. The net result is that DOD must pay more for its requirements per unit than it would otherwise. In addition, loss of this work reduces the amount of capital available for Independent Research and Development, plant modernization and munufacturing technology.

What can we do to stop this erosion of our industrial base? I will be the first to admit that I do not have all the answers, because Congress as an institution has barely scratched the surface of the offset problem. The Executive Branch has actively hindered any initiatives in this area. The large prime contractors seem content to let their U.S. subcontractors go out of business for the sake of short term gains.

I would propose a first step, however. Let us mandate some framework that would permit subcontractors to freely negotiate the terms of license agreements by which foreign manufacturers would produce U.S. designed defense components. Such an arrangement help preserve U.S. intellectual property rights, and prevent the primes from disregarding the interests of the U.S. subcontractors.

Second, we need to refine our techniques for determining whether foreign governments are subsidizing their defense companies. The "two way street" of defense trade cannot work over the long run if we must compete in price with subsidized overseas suppliers.

Finally, we need reciprocity in offsets. If a foreign country demands them from us as a condition for doing business, then

that country should be aware that it faces equal offset agreements if it wants to penetrate the U.S. market.

Mr. Chairman, we cannot wait forever to have an offset policy. The "Single Europe" of 1992 will be an exceedingly hard market to crack if we operate in a business-as-usual manner. The Europeans see unification as a way of regaining competitiveness in high technology sectors such as aerospace and defense. Up to now, the EEC has not regulated imports of defense items, but there are strong indications that that will change. If by the next decade we do not have an offset policy in this country, our commercial competitiveness, our technology base, and, in the long term, our national security itself will be at risk.

Mr. Chairman, I commend you for holding this hearing and for beginning to address offsets in the Defense Production Act. As I said, maintaining our industrial base is a matter of national security. I hope we can work together toward crative and effective solutions.

Senator DIXON. Thank you very much, Congressman Kasich. We appreciate very much the fact that you would come over here and give us your time.

Thank you.

Ladies and gentlemen, the second panel will be General John R. Guthrie, U.S. Army, retired, formerly the Commander, U.S. Army Materiel Command; Dr. Lawrence J. Korb, formerly Assistant Secretary of Defense, who is now with the Brookings Institute in Washington; and Dr. Robert Costello, formerly the Undersecretary of Defense for Acquisition, who is with the Hudson Institute in Indianapolis now.

Would you gentlemen be kind enough to come up here?

It appears that Mr. Korb is not here.

Well, I am delighted to have you two fine gentlemen here, and, Dr. Costello, welcome back to Washington, where you and I used to have a lot of fun working on the question of how we would make the Undersecretary of Defense for Acquisition be a very meaningful part of our Department of Defense.

Under the order we have here, General Guthrie, you will go first. So if you would proceed. We prefer if you could limit your verbal remarks to around 7 or 8 minutes. If you can do that, we would appreciate it, and then we will have a good question and answer period.

We will put your full statement in the record, I assure you.

STATEMENT OF GEN. JOHN R. GUTHRIE, U.S. ARMY [RET.], FORMERLY COMMANDER, U.S. ARMY MATERIEL COMMAND

Mr. GUTHRIE. Thank you, Mr. Chairman.

As President Reagan said when they were hanging his portrait at the White House the other day, he quoted King Henry VIII, who advised each of his six wives, I shall not keep you long. [Laughter.]

I am Gen. John R. Guthrie, U.S. Army, retired, a former Commander of the U.S. Army Materiel Command.

It is a welcome opportunity for me to appear before this committee to testify on a subject of vital importance to our national security, with which I have been deeply concerned for approximately 20 years.

I think you, Mr. Chairman, and your colleagues on this committee are to be commended for focusing attention on these important matters at this particular time.

As a former Commander of one of the military service's major research and development, procurement and production, supply, transportation, and maintenance commands, I have been asked to comment on the provisions of S. 1379, the Defense Production Act Amendments of 1989, with emphasis on those which appear especially valuable or which foster concern.

While my comments will be drawn primarily from my experience while in uniform, they can hardly fail to be colored by my subsequent experience in a civilian capacity, either while I was with the Association of the U.S. Army or subsequently in defense industry.

I have reviewed the testimony of the distinguished witnesses who have appeared at your prior hearings with great interest and, not surprisingly, find myself in substantial agreement with their testi-

mony, particularly that of Secretary Carlucci, Mr. Norman Augustine, and Admiral Bobby Inman, with whom I have worked over the years. I will not attempt to repeat what they have already told you except possibly for emphasis.

GLOBAL ECONOMY

Certainly, there is no question that we are at a watershed point in our history. The global economy, about which you have heard a great deal, and events in China, in Central and Eastern Europe, in the Soviet Union itself and, let us not forget, in Central America, have made that fact abundantly clear. At a time when a total review and recasting of all aspects of our national strategy are clearly indicated, these hearings, which address a primary deficiency in our present posture, are particularly timely. As Mr. Augustine said: "it is critical that we maintain a strong foundation for a flexible response."

There is no longer any disagreement, so far as I am aware, that our defense industrial base, on which we rely for no small part of our overall deterrent posture, is in horrible condition, and it is getting worse as producers from the top to the bottom of the structure leave the defense business. Recent studies have documented these facts and identified many of the contributing factors. I would like to emphasize four considerations.

Even when money was relatively abundant, it was very hard to get defense decisionmakers to commit funds to modernize the production base. Now that the money is drying up, one may expect increased difficulty in obtaining support.

Second, it was also difficult to generate an understanding of the need, and consequent support, for independent research and development funds as allowable contract costs, and it remains so today.

Third, at a time when the increasing need to integrate our economic and military strategies requires much greater reliance on commercial products to meet our defense needs, our commercial production base is at best complacent and has become increasingly less competitive in many domestic and international markets. Yet there are few, if any, indications that I can see that U.S. industry is prepared to forsake what I call the quarterly bottom line syndrome in order to generate the necessary funding for the long-term investments required to regain the technological and production superiority upon which our security depends.

And, finally, legislative and regulatory modifications of the acquisition process over the past two decades have so complicated and overburdened the entire structure that it is in danger of collapsing of its own weight. Not only are we unable to provide defense and industry managers reasonable assurance of stable funding, but we also continue to insist on changing our acquisition management strategy and organizations every 2 or 3 years, although we know it takes at least 7 years to research, develop, procure, produce, and deploy a major weapons system.

Our objective must be to rebuild and to regain U.S. technological and production leadership. This will require that we not only stem the drain of competent and capable defense producers, but that we

reverse it, hopefully by providing incentives that induce producers to reenter the defense market.

In my judgment, S. 1379 will contribute substantially to that end. My comments on its provisions are included in the more detailed statement which I have submitted. Permit me to say here that there are no provisions with which I take strong exception and that I strongly favor those regarding the establishment and initial capitalization of a separate DPA revolving fund, section 113, the expansion of eligibility and Presidential authority for title III support, section 111, the establishment of the Industrial Capabilities Committee, section 201, the designation of the Secretary of Defense as a member of the Economic Policy Council, section 202, and section 203's call for periodic exercises to assess industrial capability.

BROADEN THE PRODUCTION BASE

In summary, the challenge which faces us is how to broaden the production base while reviving its vitality and productivity. Our ability to meet that challenge is complicated by a number of intractables, including our quarterly bottom line syndrome, an educational system that is not providing qualified scientists and engineers in anywhere near the numbers required, an acquisition system that is increasingly overburdened with costly, counterproductive legislative or regulatory requirements, and a failure on the part of unions to recognize that they must get involved and play a positive role in helping to meet the challenge we all face.

Thank you for affording me this opportunity, Mr. Chairman, to appear before this committee to discuss matters which are of such importance to our future well-being. Again, I feel that you are to be congratulated for taking the initiative in seeking to revitalize our defense—and with it, our commercial—industrial production base.

Thank you.

[The complete prepared statement of Gen. John R. Guthrie follows:]

STATEMENT

by

JOHN R. GUTHRIE

General, U. S. Army Retired

before the

COMMITTEE ON BANKING, HOUSING,
AND URBAN AFFAIRS

of the

United States Senate

* * *

WASHINGTON, D. C.

NOVEMBER 17, 1989

Good morning, Mr. Chairman and members of the committee:

I am General John R. Guthrie, United States Army Retired, a former commander of the U. S. Army Materiel Command. It is a welcome opportunity for me to appear before this distinguished committee to testify on a subject of vital importance to our national security about which I have been deeply concerned for approximately twenty years. I think you, Mr. Chairman, Senator Dixon and your colleagues on this Committee are to be commended for focusing attention on these important matters at this particular time.

As a former commander of one of the military services' major research and development, procurement and production, supply, transportation and maintenance commands, I have been asked to comment on the provisions of S. 1379, the "Defense Production Act Amendments of 1989" with emphasis on those which appear especially valuable, or which foster concern. While my comments will be drawn primarily from my experience while in uniform, they can hardly fail to be colored by my subsequent experience in a civilian capacity, either while I was with the Association of the United States Army, or subsequently in defense industry.

I have reviewed the testimony of the distinguished witnesses who have appeared at your prior hearings with great interest and, not surprisingly, find myself in substantial agreement with their testimony, particularly that of Secretary Carlucci, Mr. Norman Augustine and Admiral Bobby Inman with whom I have worked over the years. I will attempt not to repeat what they have already told you except possibly for emphasis.

Certainly, there is no question that we are at a watershed point in our history...the global economy (about which you have heard a great deal) and events in China, in Central and Eastern Europe, in the Soviet Union itself, and, let us not forget, in Central America have made that fact abundantly clear. At a time when a total review and recasting of all aspects of our national strategy are clearly indicated, these hearings, which address a primary deficiency in our present posture, are particularly timely for, as Mr. Augustine said, "It is critical that we maintain a strong foundation for a flexible response."

There is no longer any disagreement, so far as I am aware, that our defense industrial base, on which we rely for no small part of our overall deterrent posture, is in horrible shape...and it is getting worse as producers from the top to the bottom of the structure leave the defense business. Recent studies have documented these facts and identified many of the contributing factors. I would like to emphasize four considerations:

- Even when money was relatively abundant, it was very hard to get defense decision makers to commit funds to modernize the production base; now that money is drying up, one may expect increased difficulty in obtaining support;

- It was also difficult to generate an understanding of the need, and consequent support, for Independent Research & Development Funds as allowable contract costs, and it remains so today;

Statement (Cont.)

o At a time when the increasing need to integrate our economic and military strategies requires much greater reliance on commercial products to meet our defense needs, our commercial production base is complacent and has become increasingly less competitive in domestic and international markets. Yet, there are few, if any, indications that U.S. industry is prepared to forsake the "quarterly bottom-line syndrome" in order to generate the necessary funding for the long-term investments required to regain the technological and production superiority which our security needs require; and, finally,

o Legislative and regulatory modifications of the acquisition process over the past two decades have so complicated and overburdened the entire structure that it is in danger of collapsing of its own weight; not only are we unable to provide defense and industry managers reasonable assurance of stable funding, but we also continue to insist on changing our acquisition management strategy and organization every two or three years although it takes at least seven years to research, develop, procure, produce, and deploy a major weapons system.

Our objective must be rebuild and to regain U.S. technological and production leadership. This will require that we not only stem the drain of competent and capable defense producers but that we reverse it by providing incentives that induce producers to reenter the defense market. In my judgment, S. 1379 contains a number of provisions which will contribute, particularly:

o Title I - I agree with Secretary Costello that the Declaration of Policy (Section 101) is a "core provision." As such, I suggest that the Committee might wish to consider adopting the expanded language contained in the Administration's proposed bill.

o Title III - I strongly support the establishment of a separate DPA revolving fund and its capitalization by an initial, one-time $200 million transfer from the National Stockpile Fund (Section 113).
- I also support expanding the classes of projects which are eligible for Title III support, increasing the threshold for Congressional authorization of individual projects from $25 to $50 million, and giving the President authority to avert industrial resources even thought the shortfall is not identified in the U.S. budget (Section 111).

o Title VII - I support the Act's proposed amendments authorizing the establishment of "sanctioned industry consortia" with new anti-trust immunities when operating within the scope and limitations of the consortium's charter (Section 708). I would suggest, however, that consideration be given to retaining the provisions of the existing Section 708 regarding "voluntary plans" as I understand the Administration has recommended.

o Other Amendments - I strongly support the establishment of an Industrial Capabilities Committee (Section 201) and the designation of the Secretary of Defense as a member of the Economic Policy Council (Section 202). However, I also agree with Admiral Inman's recommendation regarding its membership as well as his and Mr. Augustine's corollary suggestion that the Secretary of Com-

Statement (Cont.)

merce sit on the National Security Council when it is considering matters relating to international economic and trade issues.

- I also strongly favor Section 203's call for periodic exercises to assess industrial base capabilities. Similar "mobilization exercises" have been conducted recently on a bi-annual basis. Although these should be played government wide by the top level decision makers to achieve greatest effectiveness, this has not usually been the case. As a result, the conditions revealed by the exercise are not visible at the highest levels and are only infrequently corrected.

- Although I understand that the Department of Defense may oppose the stockpiling provisions of Section 302 because consumables are already stocked by the military services and the Defense Logistics Agency and non-consumables would be subject to obsolescence, I support the Defense Science Board's call for 18-month buffer stock which Section 302 would permit.

- On the other hand, Sections 211, 212, 213, 214 and 222 appear to be unnecessary either because they are already covered in other legislation or because they are already being applied as matters of policy.

In summary, the challenge which faces us is how to broaden the production base while reviving its vitality and productivity. Our ability to meet that challenge is complicated by a number of intractables, including our "quarterly bottom-line syndrome," an education system that is not producing qualified scientists and engineers in anywhere near the numbers required, an acquisition system that is increasingly overburdened with costly, counter-productive legislative or regulatory requirements, and a failure on the part of unions to recognize that they must get involved and play a positive role in helping to meet the challenge.

Thank you for affording me this opportunity to appear before this Committee today to discuss matters of such import to our future well-being. You are to be congratulated for taking the initiative in seeking to improve our vital defense industrial production base.

7420 Walton Lane, Annandale, VA 22003-2555

General John R. Guthrie, U. S. Army Retired

Biographical Sketch

General Guthrie, a native of Phillipsburg, NJ, retired from the U.S. Army on September 1, 1981 after more than 39 years service, the last four as the Commanding General, U. S. Army Materiel Development & Readiness Command (DARCOM). He is currently self-employed and living in Annandale, VA.

An honor graduate of the Princeton University Field Artillery ROTC in 1942, "Jack" Guthrie commanded Field Artillery units at every level from battery to division artillery and served in a wide variety of other Army and Joint line, staff, teaching and diplomatic positions. He graduated from the Field Artillery School in 1942, the Command & General Staff School in 1944, and the National War College in 1961.

Line duties ranged from battery commander in the 3d Infantry Division Artillery (1950) to Commanding General, IX Corps/U. S. Army Japan (1975-77). They included front line action during the Korean War and several other tours in the Pacific and Japan, including assignments as Division Artillery Commander, Chief of Staff and Assistant Division Commander, 25th Infantry Division and Assistant Division Commander, 2d Infantry Division in Korea. Key Washington assignments, in addition to DARCOM, were with the War Department Office of the Assistant Chief of Staff, G2 (1944); the Office of the Chief of Research & Development, DA (1956-58); as Assistant Executive to the Secretary of the Army (1959-60); in the Office, Joint Chiefs of Staff (1965-66); as Director of Developments, OCRD, DA (1966-67); and as Director, Research, Development & Engineering and Deputy Commanding General for Materiel Acquisition, U. S. Army Materiel Command (1968-73).

General Guthrie's 12 years in Joint assignments included three tours on the Staff, Commander-in-Chief, Pacific, the last as Deputy Chief of Staff, CINCPAC (1973-75). His involvement with materiel acquisition and missile and space activities began in 1953 when he was assigned to the Combat Developments Department of the Artillery & Guided Missile School. Transferred to the Office of the Chief of Research & Development in 1956, he served successively as staff officer for every Army surface-to-surface free rocket and missile system from LITTLE JOHN to JUPITER and PERSHING, and as Army staff project officer for the successful launching of the Free World's first artificial earth satellite -- EXPLORER I -- in January 1958.

General Guthrie joined the Association of the United States Army National Headquarters in February 1982, serving as the Director of its Landpower Education Fund and Program until again retiring on December 31, 1986. He was a Trustee of Princeton University from 1981 to 1985, serving on Committees on Grounds & Buildings, Health & Athletics, Student Life, and Curriculum and on the Trustees' Audit and Admissions Subcommittees.

He currently serves on the Board of Directors of the Army & Air Force Mutual Aid Association, on the Board of Advisors of the National Contract Management Association, and as a member of the National Research Council's Defense Space

7420 Walton Lane, Annandale, VA 22003-2555

Gen. John R. Guthrie, USA Ret.
Bio Sketch (Cont.)

Technology Assessment Panel and the Center for Strategic & International Studies Working Group on the Defense Industrial Base.

He also serves on the boards of Aqua-Chem, Inc., Milwaukee, WI and Ferranti Defense & Space, Van Nuys, CA and was formerly a director of KDI Electro-Tec, Inc., Blacksburg, VA and RFI Corporation, Bay Shore, NY.

General Guthrie's awards include the Distinguished Service Medal (with Oak Leaf Cluster), the Legion of Merit (with two Oak Leaf Clusters), the Bronze Star Medal (with two Oak Leaf Clusters), the Joint Service Commendation Medal, the Army Commendation Medal, the Order of the Rising Sun (2d Class) (Japan), the Order of National Security Merit Guk-Seon (ROK), and the ROK Presidential Unit Citation. He is the recipient of the Federally Employed Women's Distinguished Service Award (1980), the National Guard Bureau Eagle Award, and the American Defense Preparedness Association's Gold Medal. He was named to the Reserve Officers Association Minuteman Hall of Fame in 1981 and is an Honorary Member of the National Industrial Security Association.

He is a member of the Princeton Clubs of Washington and New York, the Nassau Club of Princeton, the Association of the U. S. Army, the Air Force Association, the American Defense Preparedness Association, the National Security Industrial Association, the Reserve Officers Association, the Retired Officers Association, the National Association of the Uniformed Services, the 25th Infantry Division Association, and the Military Order of World Wars.

General and Mrs. Guthrie, the former Rebecca Jeffers of Key West, FL, have six children and four grandchildren.

Senator DIXON. Thank you very much, General. I appreciate your contribution very much.

Dr. Costello, it is always a pleasure to see you again.

STATEMENT OF ROBERT B. COSTELLO, FORMERLY UNDERSECRETARY OF DEFENSE [ACQUISITION], HUDSON INSTITUTE, INDIANAPOLIS, IN

Mr. COSTELLO. It is a pleasure to be here this morning, especially since I represent the bridge between yourself and Congressman Kasich, because I am from Indiana now, and if people understand geography in the United States, Indiana is what supports both Illinois and Ohio.

Senator DIXON. Links us together. [Laughter.]

Mr. COSTELLO. My comments that I have submitted in my formal statement are relatively succinct because I have to work on my own word processor now, and I will try to hold my summary to at least the same length.

The concerns expressed by the committee have already been highlighted by the General, and also I appreciate his specific highlighting of the issues within the S. 1379. I would like to take a minute, though, to express my concern in support of the committee's position.

Early last week I had a chance to have a detailed session with the GAO special team looking at EC 1992, the European Community 1992. Volume 1, "Towards a Stronger Europe," is a document that they were looking at and I have concern with, a report by an independent study team established by the Defense Ministers of the Independent European Program Group to make proposals to improve the competitiveness of Europe's defense equipment industry, a very interesting document.

They have outlined their adversary. They pointed their finger at him. It is us.

I think that the GAO report should be eagerly awaited as a significant document for the deliberations of this committee as well as your companion committee in the House.

A lot of work has been started. A little over a year ago we put together in the Defense Department the report "Bolstering Defense Industrial Competitiveness." There is a broader issue. You cannot separate the defense industrial base from the U.S. industrial base, and when I left the Department of Defense I chose to join the Hudson Institute, and we have put together an agenda, a proposal, to put together an action agenda for the U.S. industrial base, and it might be of value to the committee if we were to introduce into the testimony the document I have here, which is a prospectus on an American agenda for leadership in manufacturing and technology, if you would permit me.

The CHAIRMAN. Please, and that will be admitted into the record.

Mr. COSTELLO. We have got a rapidly changing environment, from one in which the Defense Department was the dominant; in fact, in many cases the only, supporter for certain areas in R&D to one where they are a partner with industry in the application of fast developing commercial technologies to solve defense needs. I

call this an area of dual use capabilities that we have to take a look at.

With the sophistication of the product and the increased capital cost for manufacturing the complex systems we need we can no longer afford those unique "defense only" infrastructures that end up delivering aircraft that cost over $500 million a piece or deliver to the field unreliable electronics systems that are already obsolete when they are introduced.

There are a couple of issues within the act that I would like to point out and emphasize.

One aspect of the act authorizes an office dedicated to industrial base issues which basically supports in the Department of Defense the Office of the Deputy Undersecretary of Defense for Industrial and International Programs that we put in place over a year ago. That was fought by everybody. But it does provide that focus that says there aren't international programs and separate issues of an industrial base in the United States. They are one and the same and they are interactive. We have to carefully look at both of those issues.

Congressman Kasich graphically described the concerns I have over offsets, and I think we have a secondary issue that will be raised by the stronger Europe approach that the Europeans are putting on the table.

EUROPEAN CONCERN

The Europeans don't care about the product cost. They care about technology flow. They are going to have a major market. The European market will be a challenge to all of us. They have already identified the European-based companies, and they have already identified multinational companies. It turns out all the multinational companies I know of that are based in Europe are classified as European companies, and all the multinational companies that I know of that are based in the United States are multinational companies and perceived as an adversary in the industrial environment that we are dealing with.

I would like to be very specific. Michelin Tire Co. has major investments, over a billion dollar investments, in North America, but they are a European company in the context of EC 1992 and consequently not to be feared.

Goodyear has over a billion dollars worth of investments in Europe, but they are an American company and a multinational to be feared in the context of EC 1992. We have got to level that playing field rapidly.

I think that the effort to put together a consistent approach to offsets is imperative to us because I see that the Europeans will play the following game. The man that puts the highest amount of technology on the table will be our partner, and that will accelerate the erosion of U.S. technological leadership, and that gives me great concern.

I think, Senator, the Dixon provisions to the act are most helpful, and I again want to emphasize that as we look at the industrial base there is only one we have to support, those activities that we put in place for dual use capabilities, whether it is HDTV in its

true sense of a coherent, interactive fiber-optic communications system for the United States or Sematech, which provides us the resources we need in the Defense Department to have flexible manufacturing capability, low cost, high quality, high technology, and low volume.

I think that the amendments to title VII are key. Sanctioned industry consortia that have been allowed to perform research and development has been a significant boost. Extending the coverage to critical consortia to produce and market product with appropriate review is a major step forward that will effectively level the playing field for U.S. industry in the global environment.

This provision is unique, and you, Senator Dixon, must be complimented for putting forth this historic proposal.

In those areas in which the act encourages the use of U.S. subcontractors and small businesses, industry must meet the challenge of the competitive marketplace. It would be inappropriate to isolate entirely those segments of the industrial base from the realities of the competitive world. To do so would ensure the loss of leadership in technology cost and quality.

Industry in these instances must meet stringent tests in their efforts to become world class. So they have a role to play. They can't expect government to do it all.

I could take a lot more time to talk about the issues, but I would defer to your questioning later, sir.

[The complete prepared statement of Robert B. Costello follows:]

TESTIMONY

by

Robert B. Costello
Senior Fellow
Hudson Institute
Indianapolis, Indiana

before the

Senate Committee on Banking, Housing, and Urban Affairs
Washington, D.C.

November 17, 1989

HI-4118-D

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

It is indeed a distinct pleasure and honor to be asked to testify again before this committee on a subject so important to the vigor of the entire nation - not only the defense sector. The hearings that have been held by this committee have been outstanding in providing a thorough understanding of the nature and scope of the problems facing industry in the United States today. The concerns expressed by the Committee to date will only be aggravated with growing pressure for sales by the NATO countries as was well expressed at the ComDef '89 conference here in Washington in early October, and aggressive sales efforts by other export-oriented arms producing nations.

More than ever the factors impacting the strength of our industrial base must take a priority in both the Executive branch and Congress as well as within the industrial segment itself. Each has a vital role to play in the rapidly changing and complex environment of international trade in which our basis for continued leadership is being severely eroded. The work in the Defense Department described in "Bolstering Defense Industrial Preparedness" has laid a foundation for understanding and progress. At the Hudson Institute we are attracting broad industrial support to continue this work as we put together "An Agenda for American Leadership in Manufacturing and Technology." The hearings being held by this committee are unique in their timing and focus. They provide the mechanism to formulate a comprehensive strategy for continued U.S. leadership with participation by all sectors.

The scope of the work undertaken will be dramatically expanded as we witness a fundamental shift in defense acquisition from one dominated by a unique defense-only infrastructure to one rapidly concentrated on dual use capabilities in both product and manufacturing capabilities. Here, we define dual use as those technologies with both consumer and defense capabilities. With the increased sophistication of product and increased capital costs for manufacturing the complex systems, we can no longer afford the unique defense-only infrastructure that delivers aircraft at over $500 million or obsolete, unreliable electronic systems that no one can afford.

We fully support the "National Defense Authorization Act, Fiscal Year 1989" provisions that have:

1. Further defined the responsibility and authority of the office of the Under Secretary of Defense for Acquisition. The office is well-established and, if it is working as well as was my experience, it will be a major force in implementing many of the changes that will evolve from the hearings of this committee and the work of others in industry.

2. The authorization of an office dedicated to industrial base issues supports the organizational structure put in place last year - the office of the Deputy Under Secretary for Industrial and International Programs - which was vigorously opposed by many, but which is now regarded most highly as the first coordinated effort in Defense to take on the issues of the global nature of the industrial base.

3. The requirement to have the Services report on foreign dependency at all levels of manufacturing will focus attention on the impact of offsets and competitive inroads in the infrastructure that have been largely hidden to date.

4. The preparation of a critical technologies plan is a needed extension of Senator Bingaman's requirement for a key technologies' list. The two efforts together will provide needed guidance for long-term evaluation of the U.S. competitive posture.

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5. The is a need for an offset policy. Not to have a policy on offsets has not been satisfactory and the requirement for the Executive Branch to develop one is admirable.

6. The negotiation of MoU's (Memorandums of Understanding) together with Department of Commerce inputs will provide the broader view necessary to assure industrial base issues are fully considered.

The Dixon provisions to the Act are most helpful. I would like to introduce here my concerns about the erosion of the defense industrial base as there is a shift to dual-use capabilities. With this change, the scope of the Dixon provisions will encompass many of the emerging technologies that will be the strength of U.S. industrial competitiveness in the global market. The Act begins to lay the foundation for a coherent U.S. strategy in the difficult international competitive market place.

The more liberal and flexible authorities in Title III should be most welcome by the Executive Branch. It is a strong demonstration that Congress is really not interested in micro-management. The institutionalization of the interactive roles of both the Department of Commerce and the Department of Defense is needed. There is a role for each and a much needed alliance between the two.

The amendments to Title VII are key. "Sanctioned industry consortia" allowed to perform research and development have been a healthy boost. Extending the coverage to critical consortia to produce and market product with appropriate review is a major step forward that will effectively "level the playing field" for U.S. industry in the global environment. This provision is unique and Senator Dixon must be complemented for putting forth this historic proposal.

The general provisions being introduced are certainly favorable to increasing the ability of the U.S. defense industry to continue to be competitive. The encouragement for improving the basic infrastructure capabilities in manufacturing focus on an area in which the U.S. has generally fallen behind. Product technology has always been the leader. Some of our competitors have had a more balanced approach with equal funding or in some cases greater funding for manufacturing and process research and development. It might be appropriate for the Act to emphasize the importance of manufacturing technology by institutionalizing the Defense Manufacturing Board.

In those areas in which the Act encourages the use of U.S. subcontractors and small businesses, industry must meet the challenge of the competitive market place. It would be inappropriate to isolate segments of the industrial base from the realities of the competitive world. To do so would insure the loss of leadership in technology, cost and quality. Industry in these instances must meet stringent tests in their efforts to become World Class.

It may be a bit beyond the scope of this Committee, but as I read the section on discouraging unfair foreign competition a subject that has been of interest to me for some years was brought to mind. It deals with a concept that I call "unrealized social costs." In the U.S., our contractors pay for Social Security, health benefits, unemployment compensation and other costs that are not paid by many of the foreign competition - a significant competitive disadvantage. Should we assess these costs on the labor costs of the foreign competitor to further "level the playing field".

The Committees continued review of the industrial base is stimulatingly needed dialogue. You are to be complimented.

Thank you.

Hudson Institute

AN AMERICAN AGENDA FOR LEADERSHIP IN MANUFACTURING AND TECHNOLOGY

A
Prospectus
for
review and comment.

Dr. Robert Costello
Rosemary Piper
David Kerr

November 1989

AN AMERICAN AGENDA FOR LEADERSHIP IN MANUFACTURING AND TECHNOLOGY

U.S. industrial competitiveness has been discussed extensively over the past decade. The early eighties with its problems of energy dependence, inflation, recession and the overvalued dollar, brought attention to the issue of America's ability to compete with other nations. More recently, the situation has improved. Noted achievements include the large number of new jobs created, a recent surge in exports and a restructuring of US companies, reducing excess capacity and focusing operations. A growing consensus now recognizes the importance of leadership in manufacturing and technology, the need for equal access to foreign markets and the key issues of quality performance and productivity growth.

Nevertheless, some disturbing signs of weaknesses in the US economy persist. International Trade: The trade deficit remains enormous, a constant reminder of the declining market share of US products even with growth of global trade. Productivity Growth: U.S. productivity growth continues to lag behind that of its chief competitors, averaging just over 1% annually for the past two decades. Living Standards: While U.S. living standards remain among the highest in the world, real wage rates have hardly risen above 1973 levels. Given slower productivity growth over the long run, the United States may need to lower wage rates further in order to continue to remain competitive.

These disquieting developments persist despite significant depreciation of the dollar, despite contained inflation, and despite the seventh year of peacetime expansion. They suggest the need for a new look at America's ability to meet the challenge of global competition.

The Hudson effort, An American Agenda For Leadership In Manufacturing And Technology, will emphasize a long-term perspective in addressing this critical issue. The study will consider the pace of technological change, demographic trends, and changing global competitive conditions in shaping the future economic and social landscape. The climate of the 1990's will be quite different, not in the least because of reforms in the EEC in 1992 and various shifts occurring within the economies of our chief competitors.

The project will draw on inside and outside talent, pulling together the Institute's leading experts in science and technology policy, quality manufacturing practices, economic analysis and education and workforce issues. Hudson will create a dialogue with top business, government and education leaders through taskforces. With this breadth of experience and range of perspectives, the Hudson taskforces will direct their thinking to specific actions which will galvanize resources to promote U.S. industrial growth.

The Hudson project will distinguish itself from others because of its comprehensive, pragmatic approach and its skepticism of

dogmatic thinking. Hudson will build on what we have learned over the last decade. Rather than add to the myriad of studies rehashing concerns over the cost of capital and the budget deficit, it will focus on a proactive agenda which offers the most opportunity for change in industry, academia and government. The objective of the study is to determine whether or not the U.S. has a long-term competitiveness problem, to identify deep-seeded weaknesses and to offer recommendations so that the country can embark on the 1990's with a clear sense of priorities.

TECHNOLOGY

Technological growth has a direct impact on industrial performance. As economies become increasingly knowledge-based, the need for technological preeminence becomes essential for America to compete successfully in world markets.

There is increasing evidence that the U.S. is falling behind in its ability to harness the potential of new technologies. While America spends more in absolute terms on research and development than any other country, it has lost or is in the midst of losing significant segments of its high technology markets. In 1986, the first trade deficit ever in high technology products was reported, followed by modest surpluses in 1987 and 1988 despite sharp depreciation of the dollar. Key markets impacted include consumer electronics, semiconductors, machine tools, computers, robotics, lasers and telecommunications equipment.

Concern over America's ability to tap technological breakthroughs is not new. There is growing consensus concerning the weaknesses in the U.S. science and technology system: (1) translation of technological breakthroughs into new products, (2) defense technologies with little spillover capability into civilian uses (Dual Use Technologies), (3) failures of cooperative efforts of research and development, (4) neglect of process technologies and (5) limited efforts to scan for new international technologies.

However, while consensus has grown with respect to the problems,

considerable disagreement remains over the best means to solve them. US government policymakers have begun to consider and in some cases adopt policies to address these weaknesses. Examples include government's response to high temperature superconductivity, the Sematech consortia and NSF programs for cooperative efforts between universities and industry. Some analysts argue the government has gone too far. Some say recent initiatives are misdirected and others charge the changes are piecemeal at best. The current reformulation of government science and technology policy presents an opportune time for a comprehensive and rigorous evaluation of methods to encourage new technologies.

The Hudson taskforce on Technology will consider the following questions. Is the United States in as much trouble as critics claim? What are our strengths and weaknesses in this area? What are the implications of current federal initiatives? Are they what we need to maintain our technological leadership? If not, what specific action should government, academia and industry be taking?

MANUFACTURING

Excellence in manufacturing continues to play a critical role in determining economic leadership among the industrial nations. Despite much discussion to the contrary, this country cannot rely soley on services to support healthy economic growth. The importance of American manufacturing is highlighted in four points. (1) The manufacturing and service sectors are closely integrated. Shipments by manufacturing companies comprise 60% of GNP. While only 20% of this represents the portion of value-added from manufacturing, the remaining 40% are purchases from other sectors to support the manufacturing effort. (2) Unemployment in manufacturing sends ripples through other sectors of the economy. According to a report by noted economists Rudiger Dornbusch and Lawrence Summers, a 1% rise in manufacturing unemployment results in a 3.2% rise in construction unemployment, a 2.4% rise in service unemployment and a 1.5% rise in retail trade unemployment. (3) A strong manufacturing base provides the cash flow to support research and development. The sector performs 95% of private R&D. And (4) America's long-term national security interests depend on the strength of its industrial base.

Signs indicate that U.S. manufacturing is not faring well in every sector. Many American industries are still struggling to maintain, or regain, their declining portion of the world market. Despite recent improvements in competitiveness, that may only reflect temporary macroeconomic effects, the United States continues to lag behind foreign competitors in terms of productivity, quality and

innovation. Neglect of new process and design improvements cripples manufacturing companies in international competition.

Clearly, America's problems in manufacturing will not be solved without improvements in the macroeconomic environment. On the other hand, current deficiencies in product development, quality, and cycle time seem to go beyond the shortcomings of our budget deficit and our savings rate.

This Hudson taskforce will consider whether current difficulties facing manufacturing industries represent an ongoing concern or a passing phenomena. The taskforce will determine the extent to which quality manufacturing practices have been implemented by companies and how to accelerate adoption. It will identify roles for industry, government and academia to promote long-term strategic planning, collaborative approaches to production and an attitude which accepts change.

PUBLIC AND ECONOMIC POLICY

Public policy plays a key role in setting the general economic environment in which U.S. industry operates. Tax laws, monetary policies, antitrust laws, regulatory controls and trade policies can either offer an incentive or disincentive to industrial growth. In addition, government spending in itself, by reallocating existing resources, has a direct impact on U.S. competitiveness.

Many argue that U.S. government policies have done little to foster an environment which promotes attention to long-term needs. There is increasing evidence that the country is misusing its energy and resources, promoting consumption over production, discouraging savings and concentrating on wealth redistribution instead of wealth production.

National policies result in a whole host of indirect costs which effect the ultimate price of U.S. products. Given this close relationship, it is unlikely we can continue to support:

- A health care system where costs have risen from 5.9% of GNP in 1965 to 11.1% in 1987 and are projected to rise further to 15% of GNP by the year 2000. Already, the U.S. spends more on health care than any other industrial nation.
- Entitlement programs where the social security system pays the average retiree three to five times more than was originally contributed. Elderly make up 12% of the population, but recieve 57% of all federal entitlements.
- A legal system where over $34 billion was spent to litigate torts, but only $16 billion went to injured people.

Many of the country's resource-allocating decisions were made at a time when there was little concern over America's competitiveness. The realities of the new economic environment

impel us to reexamine exactly which social policies are fundamental to our country and which are not.

The Hudson taskforce on Public and Economic Policy will reassess historical priorities and consider the following questions. Can the U.S. do more to create a fair, competitive environment? What should be done to inspire adequate attention to long-term needs without stifling economic freedom and individualism? How can the United States, with little tradition of government involvement in promoting industry, compete with countries where government plays a significant role?

HUMAN CAPITAL

The quality of our human capital base is one of the most important factors behind America's ability to sustain rising living standards. Efforts to implement increasingly sophisticated technology, emphasize quality and accelerate productivity depend upon the preparedness of the workforce and its willingness to accept change.

To date, much attention has been given to the educational deficiencies of the labor pool. Less focus has been placed on the attitudinal changes required by management and labor in implementing quality manufacturing practices. Historically, U.S. business has overlooked the potential of its human resource base. The assembly-line approach, a hallmark of American manufacturing, encouraged the view of labor as a factor of production to be marginalized. Emphasis was placed on keeping costs/wages down.

Successful companies in an increasingly knowledge-based economy will require much more of their employees. Improving performance will depend on acceptance of automation, increased employee involvement and above all, a commitment to excellence. It will mean structural changes including a flatter hierarchy and more functional linkages. Finally, it will hinge on continual training and skill development.

The Human Capital taskforce will address the following questions. Why have American managers been slower than their foreign

counterparts to implemant the principles of Total Quality Management? How can the United States inspire its workforce? What role can our schools play in encouraging cultural change within management and labor? How can government facilitate cooperation between management and labor? The taskforce will consider the organizational changes, incentive programs, and management styles needed to support continual focus on quality performance. In addition, it will make recommendations on how to build a more flexible workforce, raise educational standards and prepare people for the jobs of the information age.

CRITICAL ISSUES TO BE CONSIDERED

The major work of the study will be done in four separate taskforces focusing on issues of Technology, Manufacturing, Public and Economic Policy and Human Capital. Several conferences will be held over the two-year study period, with Hudson providing background analysis and giving focus to the dialogue at each meeting. Participants will take an active role in providing a breadth of experience and insights to the study. The following partial list highlights some of the potential issues to be addressed by the four taskforces.

I. TECHNOLOGY

Translating technological breakthroughs into new products.
- How to speed up the process.
- A role for government, academia, industry and labor.
- Encouraging new technologies without picking winners and losers.

Improving efforts of cooperation.
- Which forms succeed, which do not and why.
- Consortia; joint ventures, partnerships and informal cooperation.

How to plug into international technologies.
- Global information sharing.

Attention to process technologies.
- Focus on the manufacturing process.

Building a state-of-the-art technological infrastructure.
- Government development of standards and specifications.

Should military R&D more directly benefit the commercial industrial base?
- Affording the tremendous burden of defense and its unique infrastructure.
- Developing a strong, supportive industrial base.
- Dual Use Technologies.

Technology and trade policies at cross purposes.
- Intellectual Property Rights.
- National Security Issues.

II. MANUFACTURING

Total Quality Management.
- Advanced manufacturing processes:
  - Flexible manufacturing
  - Cycle time management
  - Factory modernization investments
  - Quality control.
- How far are we in adopting Total Quality Management?
- What is keeping US companies from implementing it?
- How to accelerate adoption.

Promoting forms of Cooperation
- What will be gained?
- Laws which inhibit efficient forms of cooperation.
- Cooperation vs. Competition: maintaining a competitive

environment while encouraging alliances.
Labor-Management Relations
Harnessing the potential of the workforce.
Short time horizons
Incentives to promote long-term strategic planning.
Attention to the global environment.
Foreign competitors and foreign direct investment.
Managing our defense in an economically interdependent world.
Mobilization capability - Dual Use Facilities.
Foreign Dependencies.
Trade policy and industrial growth.
What, if any, are useful forms of protectionism?
What measures may be justified as leverage in negotiations?
What measures are justified taken in response to foreign dumping?

III. PUBLIC AND ECONOMIC POLICY

Coherent Tax Policies
The merits of incentives to invest long-term, encourage production over consumption and promote savings.
Should the U.S. impose a value-added tax?
Antitrust Regulation
Revitalizing antitrust laws in light of the current international environment.
Promoting coordinated action without stifling competition.
Health Care Policy
National Health Insurance?
Who should bear the cost for health care?
Product Liability Costs
Caps? A national system?
A larger role for judges? Loser pays all legal fees?
Entitlement Costs - social security, welfare, etc.
Who pays - producers or consumers?
Should we give our competitors incentives to match our level of social benefits?
Environmental Regulation
How to improve current environmental regulations.
How to promote modern, efficient and environmentally sound economic growth.
What other countries are doing.
Penalty vs. Incentive.
Defense Expenditures
Spending defense dollars to improve industrial competitiveness.
Burden sharing.
Infrastructure
Defining and building a world class transportation and communication system.
Capital Costs
Steps to encourage long-term investment.

IV. HUMAN CAPITAL

Labor Projections
- Skill requirements
- Workforce mix
- Projected education levels

Education
- Pre-school
- K-12
- Job retraining
- Engineering and science training

Cultural change within management.
- Participative management skills.
- Innovative human resource policies
- Leadership to get people to accept change.

Ethics - promoting our stock of "Cultural Capital"
- A work ethic, an enterprise culture.

Senator DIXON. We will certainly develop it further in the questioning, Dr. Costello, and I thank you for your contribution. I hope that you and Mr. Guthrie will see to it that any material such as that that you have suggested in your remarks be reproduced in the record. We are anxious to have it.

Dr. Korb, we are delighted to see you here, former Assistant Secretary of Defense for Installations and Logistics and now at the Brookings Institution here in Washington. A pleasure to see you this morning here.

STATEMENT OF LAWRENCE J. KORB, FORMERLY ASSISTANT SECRETARY OF DEFENSE [INSTALLATIONS AND LOGISTICS], THE BROOKINGS INSTITUTE, WASHINGTON, DC

Mr. KORB. Thank you very much, Senator. I apologize for being late. They decided to have a demonstration at Washington Circle this morning while I was driving in my car. There wasn't too much that I could do about it.

Senator DIXON. I see.

Mr. KORB. I am pleased to be here because one of the areas I worried about when I was in the Pentagon was the whole area of mobilization. I was the cochair with Dr. Ikle of the Defense Mobilization Panel. As I mention in my testimony, I was a member of the Defense Technology Base Advisory Panel of OTA last year, and I am presently on the Advisory Board of FEMA.

Before I talk about your amendments which, like Dr. Costello, I support wholeheartedly, I would like to point out a couple of things.

Things have changed an awful lot since the last time we reenacted the Defense Production Act. For example, at the time we reenacted the Defense Production Act in late 1984, we were anticipating that the Defense Department would spend about $2 trillion in the 1986 to 1990 budget timeframe. Actually, it received only $1.4 trillion because of what we might call Gramm-Rudman-Gorbachev. This shortfall has already had a tremendous impact on defense industry.

I notice that Senator Hollings wants his name off the bill. So maybe we can put Mr. Gorbachev's on.

DECLINE IN DEFENSE SPENDING

Defense spending is likely to decline for the remainder of this century. If we are successful at START and CFE, I feel that defense spending in real terms is likely to fall between one-third and one-half over the next decade, and that fact will make it much more critical the type of mobilization base that we have.

Even without these arms agreements, budget pressures are already pushing defense spending down, and so—even without these arms agreements, which I think and hope that we will get, defense spending could fall another 25 percent.

One might be looking at a force in the year 2000 that would have half the number of active Army divisions, half the number of tactical air wings, and one-third the number of ships. Over the next 10 years we will see some defense companies probably go out of business.

I am somewhat amused by the language in the fiscal year 1990 Defense Authorization Act that basically tells Grumman that after they have finished the 18 remaining F-14-D's not only will they get no more contracts but they have to throw away the tools. I don't know if this is something——

Senator DIXON. And they had to fight awful hard to get that deal, Dr. Korb.

Mr. KORB. That is right.

So what we are probably looking at is a different type of environment. Should we have to mobilize again, I think one thing that seems to be certain as a result of the events that are taking place in Europe, we will have much more mobilization time. Right now, as you know, we are committed to having in Europe within 10 days after D-Day 10 ground divisions, 100 Air Force squadrons, and a Marine Corps expeditionary brigade. That would put a tremendous strain on us right now. One of the things coming out of the changed international environment is that we will have much more time to mobilize.

DEPENDENCE ON FOREIGN SOURCES

Another fact, which Dr. Costello has already mentioned, is the dependence of this Nation upon foreign sources for its needs and the penetration of American defense industry by foreign companies. I think these developments are of some concern, but I don't think that, A, we can over-react or, B, that we can really turn back the clock in these areas.

I don't see any major sectors or whole industries we have to be worried about. However, there are some materials and some technologies about which we need to be concerned. It is important as we look at the Production Act that we—in the name of protecting these technologies or certain materials, that we don't overreact and protect whole industries which may be inefficient.

But nonetheless, even with the changes in the Soviet Union and Eastern Europe the United States still will be a world power, and we will still need to have a significant military establishment which must be able to operate effectively in peacetime and must have the capacity to mobilize to meet national emergencies.

So I urge that the Production Act be reenacted, and I think that your amendments do an excellent job of helping us deal with the new environment.

I like Title III, because it increases the flexibility and range of government administrators to foster the development of new technologies and protect old ones, and like Dr. Costello, I support Title VII, because it would enable us to protect those technologies in the world environment without running afoul of antitrust laws, Title VII allows Government executives to do things, which on the surface might be considered a violation of antitrust laws, since Title VII mandates that the deliberations have to be open, the public interest will be protected.

In conclusion, while I think it is important that we do focus on reenacting the Defense Production Act, I think we also need to look forward. I would urge the Congress as it looks forward not only to worry about protecting the industrial base but helping companies

which are very dependent on defense business now to move to non-defense business. In short we need an Economic Conversion Act as well as a Defense Production Act.

Thank you very much, Mr. Chairman.

[The complete prepared statement of Lawrence J. Korb follows:]

TESTIMONY OF LAWRENCE J. KORB
before the
Senate Banking Committee on S1379

November 17, 1989

I have had a long interest in the health of the defense industrial (or manufacturing) and technological base. During my years of service in DOD (1981-85), the Deputy Assistant Secretary of Defense for Mobilization reported directly to me. Last year I was a member of the Defense Technology Base Advisory Panel of the Office of Technology Assessment and am presently a member of the Advisory Board of FEMA. Therefore, I appreciate the opportunity to appear before you to discuss the Defense Production Act.

There is no doubt that the nature of the defense industrial base has changed significantly over the past 25 years, but so too have the actual and anticipated demands that the Department of Defense places upon that base. Moreover, the nature of the base and the demands upon it will continue to change significantly over the rest of this century. For example, in late 1984, shortly after the last passage of the Defense Production Act (DPA), the Reagan Administration projected that DOD would spend $2 trillion in the FY 1985-90 time frame. DOD actually received authority to spend $1.4 trillion. This $600 billion gap between actual and anticipated revenues has already had a tremendous impact upon the defense industry.

Similarly, because of "Gramm-Rudman-Gorbachev," defense spending is likely to continue to decline for the remainder of this century. If the U.S. and U.S.S.R. are successful in the START and CFE negotiations, defense spending in real terms is likely to fall between 1/3 and 1/2 over the next decade. By the turn of the century, the number of strategic nuclear warheads is likely to decline by at least 50 percent,

land divisions by 45 percent, tactical air wings by 33 percent, and total ships by 30 percent.

Even without the START and CFE agreements, defense spending in real terms will fall by at least 25 percent over the decade of the 1990's. There is no doubt that because of these trends there will be excess capacity in the defense sector and that several defense firms will have to diversify or go under. I would not be surprised to see such companies as Grumman and Northrop out of the defense business altogether. Indeed, the language in the FY 1990 Defense Authorization Act all but guarantees that Grumman will never make another naval aircraft after it completes work on the 18 remaining F-14D's.

The type of national emergency for which we would have to mobilize is also undergoing dramatic changes. Based upon Gorbachev's unilateral reductions which are already underway and the Soviet proposals at CFE, it will take the U.S.S.R. and its allies at least three months to mobilize should they ever decide to launch an attack on the West, compared to only 10 days at the present time. Lengthening the warning time almost tenfold will have a great impact upon the defense industrial or manufacturing base that must be maintained in peacetime. Moreover, given the lethality of modern weapons, it is hard to imagine a conventional war in Europe in which the superpowers are involved lasting very long. Thus, it is improbable that the U.S. industrial base will ever be called upon to produce 1,000 ships and 100,000 airplanes annually as it did in World War II.

Should the U.S. go to war again for a sustained period, the chances are that it will be involved in a protracted limited war like Vietnam. At its height, that war added less than 2 percentage points of GNP to defense spending and had a negligible impact on personal consumption and domestic investment. (World War II by contrast added 36 percentage points to the share of GNP consumed by defense and virtually wiped out domestic investment.)

Another factor that is changing is the dependence of this nation upon foreign sources for its defense needs and the penetration of American defense industry by foreign companies. Although foreign dependance and indeed ownership are of some concern, I believe it is important not to overreact to these events. There are no major sectors (e.g. aircraft, chemicals, electronics) of defense purchases which import as much as 20 percent of their product. However, DOD and the nation have long been pervasively dependant upon such items as glass, sapphire, and high-purity silicon. In addition, there are a few specific defense related technologies, like composites, fiber optics, low observables or stealth, and large-scale integrated circuits, whose use will increase dramatically over the next five years. It is upon items such as these that our concerns should be focused. Similarly foreign ownership of most defense industries is no more threatening than the co-production of defense items by U.S. and foreign companies, which is not a new phenomenon.

Nonetheless, as a great power with a need to maintain significant military strength to protect its global interests, even in the post containment area, the United States still must preserve and continue to

enhance its defense industrial and technology base, particularly the latter, in peacetime and have the capacity to mobilize its productive capacity to meet national emergencies. The authorities contained in the Defense Production Act of 1950 are useful in helping meet these objectives. Thus, the DPA needs to be reenacted with amendments necessary to adjust to the changing environment. In my view, S1379, the DPA Amendments, offered by Senator Dixon do just that.

His amendments to Title III increase the flexibility and range of government administrators to foster the development of new technologies and protect the old ones. The proposed amendments to Title VII would allow American companies to cooperate for the purpose of enhancing the industrial and technological base while protecting the public from closed door conspiracies. Dixon's other amendments, which support the recommendations of the Defense Science Board and the Air Force Association, will help the government better coordinate its activities and develop policies to carry out the purposes of the DPA.

While the Congress is deliberating on this legislation, it should keep in mind that the DPA is about to celebrate its 40th anniversary. It was a product of the Cold War. And while the DPA has some utility in the post-containment era, Congress should also focus its efforts on conversion. The challenge of the 1990's will be converting some defense industries to civilian pursuits, not just protecting the industrial base. The DPA needs to be supplemented by an ECA (Economic Conversion Act).

A number of things occur to me that I will question the three of you about. I might respond first by saying I agree thoroughly about the fact that we have seen the flattening of our commitment to military spending in the Congress in the last several years, and now we are starting to see the beginning of the down curve. Depending on how much sequestration we are going to have in connection with reconciliation this time—and I still think there will be reconciliation with some kind of an agreed sequestration— that curve will be, you know, somewhat worse than we presently expect, but clearly worse than we thought it would be even 1 or 2 years ago. I think you are quite right in suggesting that we will continue to live in a time of diminished expectations with respect to what we do for our military for a long, long time, which I think really makes this whole issue of the defense industrial and technology base even more critical for those of us who care about it.

Within the last several weeks I have spoken to I don't know how many groups about this subject matter. There is a lot of interest in it. Former Senator Jeremiah Denton had a room full of people out here on this subject one day last week. Yet, my sense of it is that there is still no coalescing of ideas by everybody about what we really ought to do.

I see joining me now my good friend, the distinguished senior Senator from Pennsylvania. Senator Heinz, who has also been very active in connection with this subject matter in this past.

But it seems to me we have got to do something to protect our critical industries. I think we have to do something to protect our interest with respect to these policies we talked about on offsets.

An interesting question was asked of me at a meeting the other morning. I spoke at a breakfast on this subject matter, and a women in the audience stood and said, "If you were king, what would you do about it?"

So, if you were king, how would you deal with this problem?

I will ask you first, Dr. Korb, since you were last.

How would you handle the problems with our critical parts, our critical industries, and our offsets if you were king?

INVENTORY OF NEEDS

Mr. KORB. I would decide which technologies are the critical ones, because I think that we do have a number of critical ones that have already been mentioned. The Defense Department is certainly aware of it.

But that would only be the first thing. As Dr. Costello pointed out in the excellent report, which he wrote when he was in the Pentagon, we don't even have an inventory of what we need. The first thing I would decide is what we need.

Senator DIXON. As you know, we asked for that last year. In that small section of the Department of Defense authorization bill that we were successful in passing. We do get a list each year of some of them.

Mr. KORB. But I think that is the first thing that we need to do.

Senator DIXON. Get the list.

Mr. KORB. Get the list.

And I think having gotten the list, then we need to decide how best to protect those technologies in such a way that we would have a reasonable degree of certainty that it deals with our defense needs. I think one has to be careful. I remember from my days in the Pentagon that every time a particular company would lose a contract its leaders would come in and say, well, you have got to give us part of the business because you have to protect the industrial base. Of course, if the industrial base everything, it means nothing.

So we have to decide what are the technologies we want to protect, how best to protect them, recognizing that there is no guarantee or completely risk-free environment. We have never in the post-World War II period spent enough on defense to carry out all the commitments. We accepted a degree of risk. I think we have to accept a degree of risk in the areas as used.

And I think if I were king one of the things I would do is move this country toward an industrial policy. I think defense industrial policy has to be part of a larger industrial policy, and I know that a lot of people think that that this—smacks too much of socialism but I still——

Senator DIXON. Well, let me interrupt you at that point because I agree with you, and I think the amazing thing is that chief executives of the biggest companies in the country come in here and advocate this same idea. Yet some would say, oh, gee, that is not the American way. You know, government and business are going to get together and figure out industrial policies. No, we don't want that.

Obviously, that is what they do in Japan, Dr. Korb, and in many other countries that are beating us up pretty good in the international marketplace right now.

You think that is the thing to do?

Mr. KORB. I think we have to move in that direction, both in terms of protecting these technologies as well as maintaining our competitiveness in the world environment. How far we should go, I do not know but I think we have to begin taking a look at the subject, possibly your amendments to title VII, which allow us in a certain sense to have a defense industrial technologies policy, might be a useful trial to see how that works because, after all, your amendment does allow people to do things that were it not for the concern about the industrial base would be considered a violation of the antitrust laws or would be considered almost a socialistic type of policy. But if that works, we can then see if we need to move into other areas.

What concerns people is that if we have an industrial policy, it will eliminate competition or diminish the incentive for competition and protect weak industries. There must be a middle ground, and I think it is time for us to recognize that we really need to begin moving in that direction.

Senator DIXON. What would you do about offsets?

OFFSETS

One of the interesting things I found was after all those speeches on offsets, which I thought often fell on deaf ears in the tremen-

dously contentious battle we had where we broke all the furniture in the Congress on the FSX deal, amazingly now in the Korean deal somebody in the administration has said take Dixon's 30 percent number, we won't make the offsets any bigger than 30 percent. It isn't even the law, but I guess everybody raised so much—I don't think it is a law, is it? I don't think we ever passed on it. They just decided to take that number, I guess.

Mr. KORB. Your amendment, which requires a report about offsets, is important. We should understand what is involved. I am however against rigid percentages. I think as long as there are guidelines, it's OK. When you have fixed percentages, then you really put yourself in a box.

One of the things I remember from my days of conducting international negotiations was that we used to complain a lot about the Congress and some of the things that they made us do. For example, when we had military construction projects overseas Congress mandated that half the business had to go to the United States. But it is a very helpful negotiating tool because you can blame those people back there in Washington or——

Senator DIXON. They throw a fit all the time, and they are a pain in the butt. We have got to do something about it.

Mr. KORB. We have to do it, and to a certain extent it happens when you deal with other countries. If you deal with the Koreans or the Japanese, they will say, well, we would like to do this, but you know our farmers, we have to placate them because they are a very powerful political group, and so on, and so forth.

Senator DIXON. Let me ask you one more question. I want to give everybody a chance, and we will let General Guthrie be king next.

John Kasich remarked in the heart of his comments something that is always my contention—the whole question of reciprocity.

RECIPROCITY

Whatever happened to reciprocity? As you know, most States have reciprocity laws with the next-door State. For example, I practice law in Illinois, and you are a Missouri lawyer. If you want to practice in Illinois, that is fine, but the Illinois lawyer has got to be able to practice in St. Louis, and so on.

Just like the whole fight on the FSX; I think one of the amusing things is that we adopted a very strong resolution, defining constraints, with 72 votes, as I recall. One of the provisions was the prevention of transferral of technology and other things like that. Then, when the President vetoed and we lost on the veto struggle—it was 66 votes, 67 being required—the deal went through. I understand the deal has fallen apart all over the place now, one of the problems being the Japanese have these laws with respect to their technology that are very strong constraints and General Dynamics is very unhappy about that. We see here already a difference in laws between the two countries that affects the viability of that agreement, and I can think of many, many other instances where I have run into situations where we permit something and the other side does not.

For instance, on offsets, my understanding of it is that most other countries don't have those kinds of arrangements that are re-

ciprocal with us. Why can't we at least say that in offset arrangements the thing cuts both ways?

Mr. KORB. Well, I think your bill does that—that is your amendment to title VII which requires reporting about it.

Senator DIXON. Yes.

Mr. KORB. I would never want to have rigid goals or rigid quotas enacted into law, but at least I think an expression that there be a certain percentage or at least the same type of situation that the other countries with whom we are dealing have. At least we will, A, tell people about our intent and, B, I think strengthen the hand of the negotiator somewhat.

Senator DIXON. General, you were a great general, but if you were king, what would you do?

Mr. GUTHRIE. Sir, having watched Good Morning, America's very interesting treatment of West Point yesterday and having been reminded by it that General Washington rejected the suggestion that——

Senator DIXON. The opportunity.

Mr. GUTHRIE [continuing]. He be king, I have to demur on that count. [Laughter.]

However, I would be happy to give a thought or two about what I might do if it were within my power to do so.

EFFECTS OF OFFSETS AND COPRODUCTION

I think first that I should say that when I was still on active duty the words that we were concerned with at that time were "rationalization," "standardization," and "interoperability," and the effects of offsets and coproduction were given seldom if any shrift by anybody other than Sam Stratton, who had an arsenal up at Watervliet Arsenal, which also was in my command, and he and I were very strongly opposed to transferring the technology and coproduction of cannon to our allies.

So I think that first I would say that any consideration of offsets also has to give consideration to the coproduction agreements into which we have entered with our allies on both sides of the—both the Atlantic and the Pacific.

Second, I think we have to also recognize that in making a decision with respect to offsets and coproduction we ought to have a balanced approach to RSI and weigh the relative benefits to the United States and its allies of having common equipment against the losses to the United States which can occur from the offset and coproduction arrangements.

I don't believe that was—I know that was not done in the late 1970's, early 1980's, when Blow Torch Bob Komer was pushing rationalization, standardization, and interoperability. Today it seems to me that there is less consideration given to that in looking at offsets and coproduction than there perhaps should be.

I also would like to go along with Dr. Korb strongly in his indicating that he thinks there should be flexibility in the considerations. Too often, it seems to me, we try to force everything into one pattern, and different technologies and different production capabilities and different materials and different countries require flexible approaches that let us shape the particular case to meet its

own ends in a manner which is most responsive to the needs of the two countries, two or more countries.

I have to say I was—I always wondered why it was that we did not have some sort of reciprocal offset agreement similar to what Congressman Kasich referred earlier in his remarks. I would certainly give some thought to that. I find personally in my negotiations with our allies that we are very poor negotiators.

Senator DIXON. That is interesting because I have always thought the same, although certainly intellectually we have the capability.

Mr. GUTHRIE. We always put all our cards face up on the table and play against somebody who has got his face down, playing no-card stud or something.

Senator DIXON. Hard way to win at poker. [Laughter.]

Mr. GUTHRIE. I spent a considerable time while I was Commander, U.S. Army, Japan negotiating with our Japanese allies. I had very close relations with them at that time, which have been sustained over the years, and I have found that they are very tough negotiators, but also that you can negotiate with the Japanese. If you do so on a straightforward and tough basis, you can reach meaningful agreements that are to the mutual benefit of both countries.

Senator DIXON. Well, I think that that is a fair observation and an important one.

I had better go along to Dr. Costello.

Mr. GUTHRIE. I would like to make two other quick points that if I don't get them in now I may not.

Senator DIXON. Please, please. But I see some other Senators here, and I want to yield to them.

Go ahead, General.

Mr. GUTHRIE. First, you have raised the subject of CEO's, and so on, from industry coming in. I think that one of the things that is of most concern to me is the industry attitude in many of these areas. We negotiated with the Japanese a voluntary cap on the number of automobiles that they sent to this country.

Did we take advantage of that and reduce the price of our automobiles and enter into a direct competition with our Japanese competitors?

No, we didn't. We raised prices at a higher rate every year than the Japanese did, and people wonder why the American people bought Japanese cars that were reliable and didn't buy more expensive American cars that were not.

Senator DIXON. Touché.

TAX BENEFITS

Mr. GUTHRIE. Second, it seems to me—and I have challenged most of my senior people in industry with this one—when the Reagan administration came in, one of the things they wanted were tax benefits that would encourage industry to invest in machinery and equipment that would improve the productivity of the American production base, and I submit to you that the benefits which industry got went almost totally and with very few exceptions straight to the bottom line and none of that return which in-

dustry got went into machinery, and so on, to improve productivity. If we ever enact something like that again it better have some constraints that will ensure that those who do not use it for the purpose it was intended are found, and suitable action is taken.

Senator DIXON. Well, you see, you make some powerful points that one has to understand when one looks at this problem.

When I was drafting those defense industrial base bills, every time they would bring me one it was always a bill that looked too protectionist to me and I would reject it and send them back to try again. You are absolutely correct, this is a very delicate field in which to work. We all see the problem, and the solution is very difficult to find in the way that is in the best interest of our great Nation. I agree with you.

Dr. Costello, you and I have had a lot of conversations on this in private, and you know my high regard for not only you but the office in which you served. I think the Undersecretary of Defense for Acquisition in time can be one of the most meaningful posts in the Government, and I still hope that the good work you did will lead the way.

Mr. COSTELLO. I was king in that job. [Laughter.]

Senator DIXON. As you say, you were. At least, the job was designed to make you king. I say that for you, by God.

Mr. COSTELLO. I called it a benevolent dictatorship, which is just the same.

If I were king, though, I would put together a series of coherent policies so we in the United States could manage the U.S. industrial resources to enhance our leadership.

Senator DIXON. Could I interrupt you at that point?

ONE CENTRAL POLICY

I agree with that. I don't mean this in a partisan way, but no administration yet has done that. But in fairness, you guys are critical of the Congress—and I think at times you are right when you are—because John Heinz and Alan Dixon do one and maybe Kit Bond and Alan Dixon do one or however it works out—but if we had one central policy, oh, yes, that would be the best, Dr. Costello.

Mr. COSTELLO. And that is what I am spending my time at the Hudson Institute trying to put together with a broad spectrum of support from industry, academia, and Government.

It is a key issue. I will go back to what the General had to say. We need to take a look at the offset policies. We have offset policies. There is one for everybody in the country, and the people that are our adversaries are using that divisiveness to defeat us one at a time. They cannot defeat us if we get together and have a coherent policy.

We also have to have some consistency. There is a major role for the Government to play. If you look at the industrial base, that major role is played by the Department of Defense because they spend so much money. They have to look at the other issues involved with the industrial base as they make any of the decisions.

Now, the General mentioned VRA's and the automobile industry, and it was a disaster. I am going to mention VRA's, and not be-

cause Senator Heinz is here, but in the steel industry. It was a rousing success up to a point, but a rousing success.

Senator DIXON. I would agree.

Mr. COSTELLO. And in that situation what was the difference? The difference was the customer. In the automobile industry it was 227 million customers. They had no voice. And, yes, there was abuse and further erosion of the leadership in the automobile industry, and that is a crime.

In the steel industry they had a customer. They had one guy who bought 17 percent of the total U.S. steel output. Guess who that guy was. It was me.

And I went to the steel industry, and I said, let's work with VRA's. I will have a better VRA. I will continue to buy over 98 percent of our steel from the U. S. steel industry, but you will play my game and we will play it together. I am going to set a set of standards that will make you world class; you will commit to meeting those standards; you will work aggressively over the next 5-year period of time to achieve world class capability in price, in quality, and the introduction of new technology.

And from the years of 1983 through 1987—or 1986, until I left, the steel industry made heroic improvements, and I think, Senator Heinz, you can say, yes, because we saw the results.

When I got to Washington, one of the CEO's came to see me and said, Bob, you know, when you were in Detroit we hated you, but you put us on the road to correct the ills and to world class leadership.

Industry has a major role to play with Government as we put these policies together to enhance our leadership. Government cannot do it by dictate alone. Industry in many cases is inhibited by government from doing it on their own. Together, we would be invincible.

Let me give you just an insight to one of the issues. I was on an airplane flying from Detroit back to God's country—that is Indianapolis—and I was with a man from the Cross Machine Tool Co. They had worked for 1½ years to put together a package to sell the Russians a machine tool facility, a transfer line to make pistons for their automotive products. Cross beat out the Japanese. They beat out the Germans. They beat out the Italians. It is fantastic. They really did all the work. They got the licenses done, and they have a contract.

The Russians came back to them and said, you build that plant, we pay you money. Now, you build us this plant over here.

Notice I put it close to the General. It happens to be closer to a Russian military base, and in the wisdom of the administrators in the executive branch of the Government, the administrators said, oh, that could be used for defense purposes, you can't have a license for that. I said, but what about—they said, no, it is 30 miles within a defense facility. And we handed that contract to the Germans.

That is not industrial competitiveness. We don't know what we are doing. We are inconsistent. Our enemies use it against us. Our friends are bewildered by our stupidity. We need some consistency on a long-term basis. We have one of the greatest things in the

world—the largest single marketplace in the world, and we sell it—give it to the lowest bidder in most situations.

It is counterproductive, gentlemen. We need consistency. We need the policies. I happen to concur that the Defense Production Act serves as a model for what we should be doing, and the Defense Department must look at its role in this comprehensive concept of dual use commercial and military production base and technology to enhance their ability to do more for less in the future.

Senator DIXON. Thank you, Dr. Costello. Very interesting remarks. I appreciate it.

My friend, the Senator from Pennsylvania, Senator Heinz.

Senator HEINZ. Thank you, Mr. Chairman.

I wanted to say to Kit Bond, who probably thinks I came in after he did that I was actually here and went down to make a quorum and came back.

Senator DIXON. Yes, he had been here. [Laughter.]

Senator BOND. Yes, I am sure, and I am from the Federal Government, and I am here to help you, too. [Laughter.]

Senator HEINZ. That is the last time I am nice to him.

Senator BOND. Also, the first time, and it is a little too late to start. [Laughter.]

Mr. Chairman, if there is any question, I yield to my senior colleague from Pennsylvania.

Senator DIXON. Senator Heinz.

Senator HEINZ. Senator Bond, you have set a tough task for an old man this morning, being so gracious and all. But anyway, we are up to it.

I want to start with a couple of comments. One is that it occurs to me that 10 or 15 years ago, when we were talking about dual use technology, we had a much smaller constellation of technologies that we had to worry about.

Today, because of the advances in technology, the dependence on semiconductors and a variety of emerging technologies, my impression is that what we currently call dual use technologies are so broad, that it is very difficult in the high tech area to identify anything that is not or could not be quite important to the defense industrial base—even if it is designed initially for civilian application.

Is that generally true today, Bob Costello?

Mr. COSTELLO. I think, Senator, that is a two-way street. I think it is also true that there is nothing in the defense area that the commercial segment can't also support. So it is a common ground.

Senator HEINZ. Yes, that is my point.

Mr. COSTELLO. It used to be that there was some singular issue over here that nobody had any interest to. They could develop that in their own cocoon and do their job. Today technology on the broad industrial base is rapidly outpacing what we are allowing to happen in the defense base.

Senator HEINZ. And that is really the point I am asking you all about. There is such a criss-cross here that you can no longer separate the two and they are critical.

Would you agree, Mr. Guthrie?

Mr. GUTHRIE. I would indeed, sir.

Senator HEINZ. And Mr. Korb?

Mr. KORB. Yes.

Senator HEINZ. And that represents a major change from the way things were 10 or 15 years ago. Ten years ago, which was just a year before the beginning of the Reagan administration, people didn't have the appreciation—with all due respect to Jimmy Carter, neither he nor any of us had the appreciation of the extent to which the world was going to change.

So that is really my first point and question.

Mr. COSTELLO. Senator, to show how far that has gone, we used to agonize over trying to find some spinoff from the defense work into the commercial segment so we could be happy about it. I sense today that if there is anything that has commercial potential, then we say, oh, industry should do it all on their own. I think that is counterproductive, and extremely difficult to deal with today.

Senator HEINZ. Now, where that leads, of course, is to the recognition that when one talks about the necessity of preserving a defense industrial base you really are talking almost part and parcel of preserving an industrial base.

My eyes aren't what they used to be, Bob.

Mr. COSTELLO. Right.

Senator HEINZ. When you were at DOD, I could have read that.

INDUSTRIAL COMPETITIVENESS/INDUSTRIAL POLICY

Mr. COSTELLO. Well, I had to modify the title. I said—when I first started it, I said bolstering industrial competitiveness, and I got some helpful editorial comments from the White House that said that is industrial policy, you can't write that report. I said, oh, I will change the title. Bolstering defense industrial competitiveness. I only changed it back to accede to the command from the top. There is only one industrial base.

Senator HEINZ. And that really—you anticipated my next comment, which is why I am not going to yield to you again. [Laugher.]

(Laughter.)

Any more than Senator Bond is ever going to be nice to me again.

Senator DIXON. I made him king, and it went to his head. [Laughter.]

Senator HEINZ. If you are going to talk about the defense industrial base/industrial base and you care about it, you are going to be talking about industrial policy, which is the "IP" word, and everybody feels like they have been hit with an electric cattle prod.

I have an objection to industrial policy. My objection is that we have one, it is pervasive today. We have a Tax Code that reflects industrial policy. We have grants that people at DOD and Commerce and elsewhere make that is industrial policy. NIH makes grants that are industrial policy. The health industry, the health equipment industry is a major industry, and we subsidize and finance tremendous amounts of research there.

My objection to industrial policy is we have a bad one. That is what I object to, and other countries have—don't get edgy, Bob—other countries have increasingly better industrial policies. I think we have been misled by the fact that the European Community had an industrial policy that was a stupid one for 20 or 25 years.

They just literally threw money at a problem. They put money into keeping people employed in all their old line industries. They did with money what we did with the auto industry in 1981, which is that we never asked the auto industry to do anything. In fact, worse, we pretended we didn't have an industrial policy for the auto industry. Bill Brock went over, whispered to the Japanese, we aren't asking you for auto quotas but we won't complain if you put them in and, as a result, there was no opportunity for a quid pro quo.

The steel VRA program, on the contrary, included a lot of things that were asked of the steel industry. They were kept on a tight leash. The program could have been canceled at any moment because it was our program, not the Japanese, and we basically said, in the law; you are going to have to invest your entire capital cash flow in becoming more competitive. Otherwise, you don't participate.

And that was, I think, a smart industrial policy move. But I know that there are many people on both sides of the aisle, probably a few more Republicans than Democrats, that any time you mention the word "industrial policy" begin to have heart palpitations.

Now, I think the most current example of this is what came to light most recently, and I am referring to what appears to be a systematic effort perhaps by your successors, Mr. Guthrie and Mr. Costello, to destroy anything in the Government that is being done on behalf of critical technologies. What I am referring to is that there was a memorandum circulating at DOD, at least until yesterday when we caught them, that was aimed at shutting down new DARPA funding for research into high definition systems and displays, and apparently they were also investigating how to cancel awards that have already been made.

And that appears to be the latest manifestation of an effort to root out anything in the Government—the Commerce Department got hit first several months ago—that had to do with HDTV. I don't know whether it is OMB or Dick Cheney or the Council of Economic Advisers or a concerted plot, or what it is, but my question to you is what do you make of that effort? Is there any justification for it that you can comprehend and, if not, do you have any advice?

Let me start with Mr. Korb.

Mr. KORB. My understanding of that is—that it wasn't DARPA. In fact, I think DARPA was very enthusiastic about going ahead with it, but that the pressure came from people in the White House who thought it smacked too much of the beginnings of an industrial policy. So it goes right to the heart of your question. It is sort of this knee-jerk reaction on the part of Republicans. I happen to be a Republican. But it is sort of that anything that smacks of an industrial policy involves corrupting the marketplace permanently.

So I wouldn't blame the entire Defense Department. I think you have to go right to the top of the administration, and I because that they have to be aware of your point; that is, we have an industrial policy de facto. What we need is a coordinated or a coherent type of policy that maximizes the dollars that we use.

Senator HEINZ. Any comments, Mr. Guthrie?

Mr. GUTHRIE. I just have two comments, Senator.

First, I am a history major basically, and I go back and look at what we did well in prior times and why did we do them well, and I would submit that one of the reasons our production base worked so well in World War II was that at that time the senior leader in most of our large industries were production people. In recent years production people have not gotten very far. The ladder—the top rung has fallen off the ladder or something, and we have relatively few.

When I came back to AMC in 1977, one of my tasks was to divide the subordinate commands into R&D commands and readiness commands, and I found that in one of—the Missile R&D Command they had totally eliminated all production engineers. How you design items to be produced without production engineers being involved from the very outset is beyond my comprehension. It is something that we have allowed to grow in this country. It is too pervasive to ignore, and I think we need a greater involvement of production people from the very outset of our research and development right straight through to the senior leadership positions.

MANUFACTURING TECHNOLOGY

A second comment I would like to make, if I could, is that I have been a strong supporter of the so-called man tech, manufacturing technology, efforts being funded by the military services over a number of years. When I retired in 1981, I had just gotten the Army portion increased—I believe to the highest level it had ever reached. While I was still working for the Association of U.S. Army, the senior people in the Department of Army decided that that was not a good idea and wanted to zero it, and basically they did pretty much zero that program. I learned about it too late to have any influence, but I can assure you that I made a strong effort to try and resurrect it.

I think back because in the late 1960's, early 1970's we took the leadership in going to computer-aided design, engineering, and, ultimately, manufacturing. Look where that has gone today. At that time we were very strongly opposed by a great portion of the community, but we were able to push it along and keep it going, and it has really paid great dividends to this country and abroad.

Senator HEINZ. Dr. Costello.

Mr. COSTELLO. I have the insider view, and I will take exception to Dr. Korb's comments because when we were proposing to strongly support the Semtech concept there were not very many people other than DARPA that had a voice at the top levels in the Defense Department to support the idea.

The same was true of increasing the Mantech funds which we were able to do in 1989, I think, by $100 million, to get everybody back into shape because everyone else said, no, that is—within the Department—that is an industrial subsidy.

When we fought to maintain the independent research and development funds, the same thing was true.

So there is a major concern in the Defense Department. I will, with a smile, look at the General again and say, yes the bean counters can do away with these programs but I think also philo-

sophically they are driven by their concern over industrial policy. But DOD policy makers are industrialists to the core because they represent such a large segment of the industrial production and might in the United States.

Senator HEINZ. I just have one comment. What this proves to me is that we may have forgotten what our national symbol is. It is the eagle, which is an alert bird, an opportunistic bird in many respects. It is a predator, and we seem to have adopted a bird of a different feather for our national symbol currently; namely, the ostrich, which sticks its head in the sand and refuses to face the danger it is in.

I don't know what the danger is, exactly where it is coming from. I have a pretty good idea. I know what it consists of. It consists of our losing our technical and industrial advantages and our high value-added industries, and I know what the consequences of that are going to be.

But unless we, collectively, both here in Congress and the executive branch, gets our heads out of the sand, it will be too late to invoke the Endangered Species Act to save the American eagle.

Thank you, Mr. Chairman.

Senator DIXON. Thank you, Senator Heinz.

Senator Bond.

OPENING STATEMENT OF SENATOR BOND

Senator BOND. Thank you very much, Mr. Chairman. I apologize for coming late. I was required attendance at the prayer meeting, and I was——[Laughter.]

This is a very important subject that you are addressing today, and I don't want to take away from it, but when our leader said it was important that some of us who were down the line show up, I did want to.

And I want to commend you, Mr. Chairman, on the series of hearings on something that is extremely important. We have some very distinguished witnesses before us today. I have heard some of their testimony and will look forward to reading the rest of it because these gentlemen obviously come with a great deal of knowledge and expertise.

I share the concern that has been expressed here on both sides of the table regarding the health of our defense industrial base. I think it is critical to our economic and military security that we maintain a healthy defense industry, a healthy aerospace industry, and a healthy electronics industry.

However, as we look at how we are going to go about it and proposals for ensuring a healthy defense industry, such as the question that is before us today, I would urge my colleagues to give some close consideration to the big picture to make sure we are going down the right direction, and, Senator Heinz, I will send you a copy of my remarks, since you are not going to be able to stay for them.

Senator HEINZ. That won't be necessary.

Senator BOND. You will go outside and listen, OK? [Laughter.]

I trust you will because I do hope that all of us will give consideration to what I believe is a much bigger picture and look for a

sound long-term solution rather than a Band-aid or, worse, a solution that may only exacerbate the existing problem.

I believe that there is another side to this question which may perhaps lead to a different answer, and I would certainly agree with the witnesses, who have pointed out the tragic mistakes made by captains of industry and how we in this country have not seen a series of consistently right judgments made by our industrial leaders.

The only thing that worries me more than those bad mistakes made by the best and the brightest in industry is to take those same folks who put their pants on one leg at a time, come from the same educational background, have the same knowledge and the same experience, and give them the power in government to make wrong decisions on a much broader scale.

Now, I have found it interesting as we look at the studies by the Center for Strategic and International Studies that the number of firms in the U.S. manufacturing in the 215 sectors from which defense purchases are made has grown steadily from nearly 120,000 in 1982 to approximately 150,000 in 1987. At the same time, however, the number of firms providing products to the DOD has declined from over 118,000 to about 38,000 in 1987. This occurred during a time of steady growth in defense business opportunities, as procurement rose from 17.1 billion in 1972 to 80.7 billion in 1987.

This shows to me, at least, that the problem is not our industrial base, but rather that our industrial base does not wish to sell to the Pentagon. Why?

Perhaps because it is not worth the hassle. Perhaps the reason our defense industrial base is shrinking is because companies no longer find it profitable to sell to the Pentagon. They look at the mountains of rules, regulations, and specifications they must deal with in order to sell to the Government, and they decide it simply is not worth the hassle.

Compounding the problems are Government policies, such as overly restrictive export controls, foreign policy controls, congressional interference with overseas transactions, a lack of export financing, which puts U.S. defense companies at a disadvantage in the world marketplace in comparison to their overseas competitors.

Do we need to overcome these problems of bureaucratic hassle and impediments by adding another layer of bureaucratic handles, hassles, and hurdles?

I don't think necessarily that is the right way to go. We had a fascinating speech earlier this week by Lech Walesa, and if he left us one message, it was that however sloppy and inefficient our system is, it is a whole lot better than the state control that he came out of. He left us a timeless message, not just for Poland but one that we ought to think about here.

My good friend from Pennsylvania said that our national bird is the eagle—ought to be the eagle, proud and independent, not a cormorant with a governmental ring around its neck.

I think that is the difference, Mr. Chairman, and I think as we discuss these problems I hope we can look at the totality of this and not try to impose a layer of bureaucracy and more redtape to

solve a problem which in part, I believe, comes about from excessive burdens, hassles, and redtape.

With that, I would, since I have made—I will make my views known in a harsh letter to follow, but I think it is only fair that our witnesses have an opportunity to critique my views and describe to me the errors in my ways.

Mr. Korb, would you like to start off?

Mr. KORB. Well, I think we are mixing up a couple of subjects here. Nobody would disagree with your point that the defense procurement system needs to be overhauled. I have testified at hearings where people have brought in the number of regulations, and they are higher than this table, I think that that certainly has something to do with the figures you cite. However, I was part of CSIS group that did that particular study to which you referred. One has to be very careful with those figures in terms of what they mean and how you count things, over time.

What we are talking about here today is a national strategy that enables us in peacetime to meet our defense needs and simultaneously enables us to prepare for emergencies.

When I first got involved in the defense business, we had just gone through a mobilization exercise called Nifty Nugget. Before that exercise DOD had gone along basically fat, dumb, and happy, not worrying about our industrial base. But when we conducted this mobilization exercise, and people said, oh, my god, what is going on.

One incident stands out in my mind. DOD wanted to get some explosives from Du Pont. DOD called up and requested them. Du Pont said, well, we are out of that business; we got out of that area quite a while ago. Nobody knew that.

So we hadn't paid attention to it. So what we are talking about here is what we can do——

Senator BOND. Had you told the industry what you were going to want? Had you laid out for industry what you needed?

Mr. KORB. No. Nobody had done anything. Nobody had done anything. This was in 1978.

Senator BOND. All right. Well, that may be——

Mr. KORB. Well, sure. I am not blaming anybody.

Senator BOND. Yes.

Mr. KORB. But what I am saying is this was in 1978, when they did this exercise, nifty nugget and discovered that, that when we called up troops we were sending them to war with Addidas tennis shoes because nobody in DOD had worried about surge capability even for military boots.

What we need to do now is step back and start thinking about what we can do. I look at this act and Senator Dixon's amendments to it, nobody is adding more layers of bureaucracy or anything. In fact, his amendments to title III give the people within the executive branch more flexibility to do what they need to do, another critical issue, is what happens if we lose certain technologies that we are concerned about, for examples—something like stealth or low observables or—composites—If in fact we don't act smart in that area it will hurt national security.

Senator Heinz I think made a very profound point, when he said we have an insurance policy because we do things in various ways,

for example through the Tax Code. In fact what we need is some coherence. That is the point of my remarks. I am not for adding more rules and regulations. We need to add some more coherence.

Senator Dixon in his amendments last year asked the Pentagon to tell him what we need to protect, you would think that people in DOD would know that. But sometimes, people don't pay attention to those things because they are so immersed in the day-to-day operations they ignore the long-term.

I also made a point in my remarks that the Defense Production Act is 40 years old now. It is a product of the cold war. We are moving into a new era. We really need to begin to think about what it is we need in the 21st century. Because of what has been happening in the world the demands on the industrial base, the type of armed force we are going to have are going to be much different, therefore we need to ensure through the legislation that exists that we enable the executive and the legislative branches to do what they need to do to enable us to meet both our peacetime and wartime needs. That is what we are talking about.

God knows, we don't need any more rules and regulations or czars. But I do think we need some coherence because what happens now is government officials do contradictory things. Industry goes to Defense, they get one answer. They go to Commerce, they get another answer. They ought to have a coordinated answer so that they can base their own policies on it.

Senator BOND. Well, I appreciate your answer. It sounds to me what you have described is a fatally flawed defense procurement policy where we haven't decided what we need to buy, planned ahead, told people what we are going to buy, and asked for the competitors in the marketplace to be prepared to compete for what we need, and what you have described is an awful situation which suggests that we have—we need a good purchasing agent in the Defense Department.

Mr. KORB. Well, you have got to remember until the Congress set up Dr. Costello's office, the Undersecretary of Acquisition, we had no one in the Pentagon in charge of that, and again I think it important——

Senator BOND. And I would observe that that is a very recent amendment to the Department of Defense reorganization bill that this Senator offered only about, what, three years ago?

Mr. KORB. Yes, the 1986 Defense Act.

But you must remember a couple of other things. Having been, as we say, in the building, having a rational defense procurement policy is easier said than done. You don't have any long-term commitments. As I mentioned in my prepared testimony, for various reasons, the Defense Department got $600 billion less in the budget process between 1986 and 1990 than they had assumed they were going to get. Right now the people in the Defense Department don't know whether if sequestration applies and for how long. They don't even know what the base for sequestration is. Because until you pass a 1990 bill it applies to the 1989 bill, and then of course you get the 1990 bill, sequestration goes to that, but sequestration might be lifted.

So I mean it is not as easy as you might think, and I think what we are talking——

Senator BOND. Nobody said it was easy, and I think we fully recognize where some of those faults lie, and it is not with the Defense Department and it is not with our defense industrial base. It is our inability to come up with a budget, and that problem is not going to be changed by legislation. It would be improved a hell of a lot if we could get our act together.

Mr. KORB. Certainly, but I think what we are talking about here is to take an act which already exists, the Defense Production Act, and modify it in such a way that it enables us to deal with the new world into which we are entering. I think that is really what we are talking about, and I don't see anything in the amendments to this act that make it more onerous than it used to be. In fact, if anything, I think it increases the flexibility of the Government to do what needs to be done.

Senator DIXON. Is my colleague satisfied? We do need to move on to the last panel shortly.

Did General Guthrie or Dr. Costello have any response before we go to the next panel?

GOVERNMENT CONSTRAINTS

Mr. COSTELLO. I might reemphasize what Larry had already mentioned. We are not saying we want more control. My god, we have more control than we can deal with.

What we are offering here is some unique ways to allow industry to do a better job by taking away some of the constraints that government has put on top of them.

I don't know whether you were here, Senator, when I described the sale by Cross to the Russians of the transfer line. They had approval. They had worked on it 18 months to get approval, and then there was another bid available to them. They were not allowed to bid there because some bureaucrat, some regulator interpreted the rule differently.

We have to have some consistency, and we have to have some coherence in what we are doing. We have got a thousand policies. We need some coherent direction, and then our industry will be able to better compete because they will be unleashed from some of the constraints that they perceive they are under today, and some of the administrators, the regulators who will be unleashed from the fear of risk and retribution—going to jail, which is one of them—that they feel that they are under today, and it is an environment we have put together, all of us working together, of no risk, and we have got to get back to the place where that eagle is willing to take a risk, and we need that.

Senator DIXON. Well, I want to tell you all that this has been a very interesting conversation and exchange in the question and answer period.

We are delighted to have our distinguished Chairman here.

I thank you all for coming.

Mr. COSTELLO. You will get the comments from the heartland of the United States, Indiana.

Senator DIXON. God bless you, Dr. Costello.

The Chairman. Mr. Chairman, I wonder——

Senator DIXON. Senator Riegle.

OPENING STATEMENT OF CHAIRMAN RIEGLE

The CHAIRMAN. Just before this panel leaves, I want to say how much I appreciate the extraordinary leadership you have given, Chairman Dixon, to focus these issues, to take us ahead and to lay the foundation from which we will develop our own recommendations and ideas as to what ought to be done.

I want to just raise one thing with this panel, if I may. I am very disturbed about these articles that have run in the New York Times yesterday and today. I don't know how much attention in terms of specific reference they have gotten earlier in the morning, but today's story entitled "Need For Reevaluation Is Seen On Cutting High Tech Aid" I think is a very dramatic story about the United States stepping back in a critical area of research and development when we ought to be stepping forward.

We see the rest of the world moving at great speed. We cite Japan of course, but there are many other examples, such as Europe 1992, coming along. Then look at the story yesterday—"Big Cuts Are Seen In U.S. Financing Of Research Work, Critics Fear Damage In Fields Vital To Competitiveness, Including Advanced Television." Just read this one paragraph in today's story, where it concludes by saying, "This week's heated controversy over high technology has led to charges that the administration is sacrificing international competitiveness for budgetary reasons and that Japanese lobbying efforts in Washington have effectively altered administration policies"—this just sounds to me like the FSX revisited, in which fight Chairman Dixon was such an important leader.

But "Commerce Department officials," it goes on, "said yesterday, for instance, that the Japanese have made a concerted effort to influence the United States to cut off funding for high definition television research. The Japanese already have a lead in setting an international standard in that technology, which provides much sharper television images."

So we are not only being impacted by our own lack of vision and lack of commitment to the future, but we have got international competitors that are coming in here and also trying to cut the legs out from under us, and I think this is dangerous stuff. I think if the United States wants to play the kind of role for the next 40 years that we have played since World War II we can't let ourselves slide out of the ballgame in terms of these advanced technology areas. I mean, this is our future.

You know, we talk about investing in human capital. We have to do that. But if we are not going to invest in research and development and be out there on the front edge with the other leading

competitive nations in the world, we are not going to have much of a future. I mean, that is just the cold, hard fact of the matter.

Do you fellows agree with these articles here? I mean, do you have the same sense of alarm that I get from this?

Mr. COSTELLO. If I may, Senator, I am quoted in the article yesterday, where I think I state I don't understand these people, I don't think they realize the impact on the industrial base that they are dealing with. I do not. I can't even conceive that approach.

The CHAIRMAN. So you are just as alarmed about this as I am?

Mr. COSTELLO. Very much so.

The CHAIRMAN. And I take it your colleagues are as well. Mr. Guthrie.

Mr. GUTHRIE. Could I add just one comment?

I have not personally seen either one of the two articles, Senator.

The CHAIRMAN. Well, I will send them down to you.

Mr. GUTHRIE. However, I would certainly associate myself with Dr. Costello and Dr. Korb, but add one thing, and that is—and I think it applies to the entire production base—that if American industry when it gets the technology is not capable of integrating it——

The CHAIRMAN. Exactly.

Mr. GUTHRIE [continuing]. And producing it and capitalizing on it from a commercial standpoint, we are not going to get there from here.

The CHAIRMAN. Right.

Mr. Korb, I take it that you also share this view?

Mr. KORB. I have seen the articles, but this has come up before with—Senator Heinz has already mentioned the HDTV type of thing.

The CHAIRMAN. Yes.

General Guthrie, I just want to ask one other question. You are as in as good a position to assess this as anybody—in terms of our military edge and superiority in the future, doesn't that depend on precisely serious commitment to these things now?

Mr. GUTHRIE. Oh, absolutely. I think a good example is the very high speed integrated circuit effort that was started back in the days when Bill Perry was in the Department of Defense. I think it has contributed directly, and I think both of these are very important. I am on a committee at the National Research Council now on assessment of defense space technology, and I would rank both of these things that we have been talking—two technologies we have been talking about as very high priority requirements if we are going to regain the space leadership we once had and abdicated.

I think our imbalance with the Soviet Union in the area of space, manned space operations, and perhaps the military use of space is one of the most serious deficiencies and greatest imbalances that we currently face today.

The CHAIRMAN. Well, I am just going to conclude with this. I think what you have just said makes the point that our strategic military capability in the future and our strategic economic capability in the future are both at risk from mistaken decisions and shifts in priority and turning away from things that we need to do, such as is described here.

Mr. GUTHRIE. I would agree, sir. If I could add two words?

The CHAIRMAN. Yes.

Mr. GUTHRIE. Strategic and tactical military capability.

The CHAIRMAN. Well, I accept that. I am going to draft a letter as the chairman of this committee, I am going to write on my own behalf and I hope to perhaps write it in conjunction with Senator Dixon because he is such a forceful leader in this area. I think we need to send a letter to the President, to the administration, and ask them to reconsider this kind of mistaken change in emphasis.

We can't walk away from the challenge of the future. We have got to step up to it, and we need to say that, and I don't say that in a confrontational tone. We want to work with the administration, but we can't have the nation veering off course here when the rest of the world is moving out front and we are just sitting up in the stands and watching it happen. We have got to—I think we have got to make an appeal for reconsideration here before we find that we fall further behind the international competition.

So I would like to undertake to draft such a letter, Senator Dixon, with you, and some of our colleagues perhaps could join us, and let them know our feeling about it.

Senator DIXON. Very good.

We thank the distinguished chairman of the committee, the Senator from Michigan, for coming here and making those remarks, and I want to thank you, Dr. Korb, you, General Guthrie, and you, Dr. Costello. It is great to see you all again. You have made a very substantial contribution, and we appreciate it.

Now, we will hear from panel 3—Mr. Albert W. Moore, president, National Machine Tool Builders Association; Mr. Jefferson Amacker, president and chief executive officer, Leach Corp., representing the American Electronics Association; Mr. Paul J. Gross, chairman, Proprietary Industries Association, from Glendale, CA.

We are delighted to have you all here.

I apologize to all three of you gentlemen if we were a little lengthy on the previous panel, though I think you will all agree that what these important witnesses have contributed is very valuable in what we are trying to do.

May I say to every one of you that if you would be kind enough to limit your remarks to the 7 minutes we have been allotting, we will place your entire statement in the record. I think it has been demonstrated we really accomplish more generally in the Q&A. We will go first, if you don't mind, with you, Mr. Moore.

Mr. Albert W. Moore, president, National Machine Tool Builders Association.

Nice to see you again, Mr. Moore.

STATEMENT OF ALBERT W. MOORE, PRESIDENT, NATIONAL MACHINE TOOL BUILDERS ASSOCIATION McLEAN, VA, ACCOMPANIED BY JIM MACK, PUBLIC AFFAIRS DIRECTOR; AND CHARLES P. DOWNER, INDUSTRIAL PREPAREDNESS REPRESENTATIVE

Mr. MOORE. Thank you, Mr. Chairman, and good morning.

My name is Al Moore and, as just identified, I am president of NMTBA, the Association for Manufacturing Technology, a trade

association whose membership includes over 300 machine tool building firms in over 400 locations, and with me today is Jim Mack, NMTBA public affairs director, and Charles P. Downer, NMTBA industrial preparedness representative.

Although the U.S. machine tool industry is relatively small in terms of dollar shipments, it remains the most critical element within the defense readiness system. Our industry builds the machines that enable the United States to maintain its defense requirements in peacetime or to increase its arsenals in times of conflict.

A struggling machine tool industry is a threat to the stability of America's industrial base. It truly jeopardizes the national security. Unfortunately, our industry is struggling and, at present, is unable to assume its vital role of manufacturing the machines which underpin America's defense posture at home and abroad.

That is why we are here today in support of your bill extending the Defense Production Act and making it a more effective tool for reinforcing America's military preparedness. The alternative to its passage next year is continued reliance on foreign suppliers to provide components and equipment critical to our national security.

The Defense Production Act was created in 1950 to help meet defense requirements during the Korean conflict. Title III of the act provides incentives to ensure that U.S. industry is prepared to respond to any future demands necessitated by the United States defense requirements.

However, funding of title III has been both anemic and erratic following the years since DPA's inception, and without adequate funding, the DPA's goal of restoring and strengthening America's military production capabilities will not be realized.

S. 1379 seeks to reverse this trend with the establishment of the Defense Production Act Fund, a revolving fund similar to the fund used during the Korean conflict. As I have explained in my written statement, Senator Dixon has devised a method of capitalizing this fund without increasing the budget deficit through the sale of excess stockpile assets and surplus Government equipment.

While we are sure that it is the intention of the DPA to include sales of excess assets of government-owned contractor-operated facilities in the category of surplus equipment, the statutory language of the law is not clear and should be clarified to explicitly include GOCO's.

The DPA revolving fund has the capacity to solve many of the critical deficiencies that exist within the industrial base, without permanently expending significant revenues. We commend Senator Dixon on his effort.

The fund would not only help reduce foreign source dependency for many suppliers and components of defense sensitive systems, it would also improve the overall competitiveness of the U.S. industry.

S. 1379 also amends title III, section 309 relating to offset arrangements and broadens the title III definitions to permit more industries to qualify for DPA projects. We applaud these changes.

However, it is apparent that throughout a succession of administrations, the OMB has thwarted the intent of Congress by establishing DPA selection criteria which are so narrow that it is virtu-

ally impossible for anyone to qualify for a project. This has resulted in underutilization of the DPA. With the industrial base in an already weakened state, it is essential that the DPA be used to the fullest extent. Therefore, we urge that Congress establish objective criteria for the selection of DPA projects. These criteria would replace the overly subjective criteria currently in use.

The United States cannot depend upon machine tools it cannot build, and it cannot deploy machine tools that a foreign source cannot or will not provide. There is a very real danger that the products of critical industries, such as the machine tool industry, will become unavailable for our nation's defense. The majority of U.S. machine tool companies are small and, by themselves, do not have the resources necessary to compete with their foreign counterparts. It is therefore necessary to pool their resources if they can hope to develop and maintain the products critical to our Nation's defense.

We support your amendment to title VII of the DPA, which broadens the antitrust protections already in place under the act. Passage of this amendment will play a necessary role in promoting the modernization of the U.S. defense subcontractor and supplier base and the development of the technology essential to meeting national security demands.

Mr. Chairman, we appreciate the attention your committee is giving to the state of the industrial base of the country. Study after study shows that America's industrial base could not support a conventional military conflict of extended duration. This lack of readiness removes an important deterrent to aggression. Our "arsenal of democracy" has become an empty warehouse, and production facilities have moved from Rockford and Cincinnati and Detroit to Osaka and Hamburg and Seoul.

The bill before you provides for a more secure America, and it does so without expending substantial new revenues. We urge you and the members of this committee to join us in supporting Senator Dixon and the other cosponsors of S. 1379 in their efforts to restore the United States' capacity to produce items critical to our national security efficiently and effectively in peacetime and in a national emergency.

Thank you, Mr. Chairman.

[The complete prepared statement of Albert W. Moore follows:]

STATEMENT BY
ALBERT W. MOORE
PRESIDENT
NMTBA - THE ASSOCIATION FOR MANUFACTURING TECHNOLOGY
BEFORE THE
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE
NOVEMBER 17, 1989

I.	INTRODUCTION	1
II.	STATUS OF THE MACHINE TOOL INDUSTRY	1
III.	THE DEFENSE PRODUCTION ACT OF 1950	2
IV.	S. 1379 ESTABLISHES THE DEFENSE PRODUCTION ACT FUND	3
V.	S. 1379 STRENGTHENS ANTITRUST PROTECTION UNDER THE DPA	4
VI.	S. 1379 MONITORS OFFSETS	4
VII.	CONCLUSION	5

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I. INTRODUCTION

Thank you, Mr. Chairman, and good morning. My name is Albert W. Moore, and I am President of NMTBA - The Association For Manufacturing Technology. With me today are James H. Mack, NMTBA Public Affairs Director, and Charles P. Downer, NMTBA Industrial Preparedness Representative.

NMTBA is a trade association whose membership includes over 300 machine tool building firms with over 400 locations. America's machine tool industry builds and provides to a wide range of industries the tools of manufacturing technology including cutting, grinding and forming machines, universal measuring machines, and automated manufacturing systems.

Although the U.S. machine tool industry is relatively small in terms of dollar shipments, it remains the most critical element within the defense readiness system. Our industry builds the machines that enable the United States to maintain its defense requirements in peacetime or increase its arsenals and the defense industries' manufacturing capabilities for defense material in times of conflict. Machine tools are the very essence of the industrial manufacturing process -- the "tools of production."

NMTBA supports S. 1379, "Reauthorizing and Amending the Defense Production Act of 1950," introduced by Senator Alan Dixon and cosponsored by Senators Heinz, Shelby, Wirth, and D'Amato. The legislation highlights and reinforces the United States' military preparedness concerns and the dangers of relying on foreign suppliers to provide critical components and equipment.

S. 1379 extends the Defense Production Act for the next four fiscal years. It also amends the Act to establish the Defense Production Act Fund, strengthen the Act's antitrust protections, and monitor offset agreements.

II. STATUS OF THE MACHINE TOOL INDUSTRY

A struggling machine tool industry is a threat to the stability of the United States' industrial base. It truly jeopardizes national security. Unfortunately, the industry is struggling despite its recent show of strength. During the past several years, U.S. machine tool builders have seen a substantial reduction in their customer base. Many machine tool consuming industries have moved manufacturing capacity offshore and equipped their facilities with

foreign-made machine tools. Many of the manufacturing firms that have retained U.S. production facilities have also purchased foreign machine tools. They have, in fact, opened a floodgate of imports -- which now represent approximately 50 percent of the value of machine tools consumed in the United States.

Reports of a recovering manufacturing technology industry are overstated and misleading. Yes, the industry did experience a mild upturn in 1988, partly as a result of national-security based initiatives such as the VRAs with Japan and Taiwan and the requirement that the DoD buy U.S.-made machine tools, and partly as a result of the economic expansion of the last six years. The determination of the industry to survive through its own efforts also contributed to last year's modest increase in orders. However, the industry is still not what it must be, and as the economy slows, many U.S. machine tool manufacturers are experiencing a decline in orders that is once again putting them and America's national security in a precarious position. At present, the machine tool industry is unable to assume its vital role of manufacturing the machines which underpin America's defense posture at home and abroad.

III. THE DEFENSE PRODUCTION ACT OF 1950

The Defense Production Act (DPA) was created in 1950 to ensure that the United States was capable of meeting its defense requirements during the Korean conflict. The Act provides incentives and safeguards to ensure that U.S. industry is prepared to respond to any future demands necessitated by the United States' defense requirements.

Of the DPA's seven original titles, only three remain active today. Title I authorizes the President to prioritize contracts according to U.S. defense needs and to allocate resources in order to maximize U.S. military preparedness.

Title III authorizes incentives to create or increase productive capacity for a broad range of material (including machine tools) needed for defense requirements, present and future. The principal incentive used by Title III's authority is a contractual commitment by the government to purchase the item produced, if there is not a sufficient demand for that product in the marketplace. However, it is important to note that a DPA purchase commitment does not automatically expend revenue. For example, during the Korean conflict, the defense industrial base could not respond to urgent defense requirements. Congress, therefore, appropriated $8.5 billion to be used by Title III of the DPA to provide incentives, such as buy-back agreements, that would encourage private contractor investments to develop new or improve existing critical manufacturing capability essential to the war effort. As a result of judicious management of the Title III program during this period, there was a ready market for the products of the new manufacturing capability once it came onstream. Thus, less than $1 billion of the $8.5 appropriated was actually expended. Title III also contains authority to make loan guarantees, low-interest loans and fast depreciation of capital investments where justified.

Title VII of the DPA authorizes the President to initiate voluntary joint ventures for the purpose of meeting the production and distribution needs which currently inhibit national defense. The companies participating in the joint ventures are accorded limited antitrust immunity.

S. 1379 reauthorizes Titles I, III, and VII of the Defense Production Act for fiscal years 1990 through 1993 and broadens the scope of these titles to ensure their effectiveness in strengthening this country's defense industrial base.

IV. S. 1379 ESTABLISHES THE DEFENSE PRODUCTION ACT FUND

Study after study shows that America's industrial base could not support a conventional military conflict of extended duration and that we are relying increasingly on foreign sources to fulfill our defense needs. This lack of readiness removes an important deterrent to foreign aggression. Our "arsenal of democracy" has become an empty warehouse; and production facilities have moved from Rockford and Cincinnati and Detroit to Osaka and Hamburg and Seoul.

The Defense Production Act was created to prevent these very things from happening. However, funding of the DPA has been both anemic and erratic following the years since its inception. Without adequate funding, the DPA's goal of restoring and strengthening America's military production capabilities will not be realized.

S. 1379 seeks to reverse this trend by the establishment of the Defense Production Act Fund which would be initially funded through the transfer of $200 million from the unobligated balance of the National Defense Stockpile Transaction Fund.

The DPA Fund would be replenished by subsequent asset sales from the stockpile not to exceed $10 million per year. Funds from DPA appropriations and from the sales of two categories of surplus government equipment under Sec. 303 of the DPA would also finance the fund. While NMTBA is sure that it is the intention of the DPA to include sales of excess assets of government-owned contractor-operated facilities (GOCOs) in these two categories of surplus equipment, the statutory language of the law is not clear on this point and should be clarified to explicitly include GOCOs.

Although any funds which are not expended in a given year would be available in future years, this is not meant to discourage the government from using these funds. The balance of this proposed revolving fund is not to exceed $250 million in any fiscal year, thus discouraging the accumulation of large unobligated balances.

Historically, there has been a great reluctance by the Office of Management and Budget (OMB), regardless of which party was in the White House, to use Title III of the Defense Production Act. It is up to the Congress to send a message to the Executive Branch that this money should be obligated to restore America's military production capabilities.

With the funding that is outlined for Title III and the establishment of the DPA revolving fund, S. 1379 has the potential to solve many of the critical deficiencies that exist within the

industrial base. It would not only reduce foreign source dependency for many components of defense-sensitive systems, it would also improve the overall international competitiveness of U.S. industry.

S. 1379 also broadens the Title III definitions to permit more industries to become eligible for DPA projects. We applaud these changes.

However, the present OMB-driven selection criteria are so narrow that it is virtually impossible to qualify for a project. This has resulted in under-utilization of the Act. With the industrial base in a weakened state, it is essential that the DPA be used to the fullest extent. Therefore, we urge that Congress establish objective criteria for the selection of DPA projects. These criteria would replace the overly-subjective criteria currently in use.

If the Congress is serious about solving this country's defense preparedness dilemma, then it will pass this important piece of legislation.

V. S. 1379 STRENGTHENS ANTITRUST PROTECTIONS UNDER THE DPA

The United States cannot depend upon machine tools it cannot build, and it cannot deploy machines tools that a foreign source can't or won't provide. At present, this is the real danger -- that the products of critical industries, such as the machine tool industry, will become unavailable for our nation's defense. The majority of U.S. machine tool companies are small and, by themselves, do not have the resources necessary to compete with their foreign counterparts. It is, therefore, necessary to pool their resources if they can hope to develop and maintain the products critical to our national defense.

Title VII of the DPA accords limited antitrust protection to companies participating in joint venture agreements. These agreements are initiated by the President for the purpose of strengthening the U.S. industrial base and enhancing national security. S. 1379 broadens the antitrust protections under the Act to permit sanctioned consortia to become involved in production, marketing, and flexible manufacturing networks along with research and development projects. Passage of this amendment will play a necessary role in promoting the modernization of U.S. defense facilities and the development of the technology essential to meeting national security demands.

VI. S. 1379 MONITORS OFFSETS

Offset arrangements are contributing to the deterioration of this nation's manufacturing sector, and its already weakened defense industrial base. Typically, these arrangements are negotiated by the U.S. and a foreign country regarding the purchase or sale of a weapon system. Foreign countries use offsets as a form of barter.

The terms of offset arrangements vary. Some require that a specified amount of work relating to the foreign purchase of a weapon system be performed by foreign firms. Others request that

the U.S. purchase unrelated goods and services from that country. There are also agreements in which the American firm must invest in a foreign firm that is located within U.S. borders. In all three of these examples, the U.S. companies are strengthening their foreign counterparts in worldwide competition and making it more difficult to halt America's industrial decline.

Also included in many offset arrangements is the requirement of technology transfer from this nation to foreign firms. This is yet another example of placing the U.S. competitive advantage into the hands of foreign firms. The American manufacturer, in effect, creates a competitor abroad while, at the same time, he makes it possible for a foreign country to infiltrate domestic markets. Stimulating new foreign competition and fostering greater import penetration results in the very thing that should be avoided: A weak and unstable industrial base threatening the safety of this nation.

Largely through Senator Dixon's efforts in the FY 89 DoD Authorization, Congress has acknowledged the fact that offset arrangements are becoming a serious problem, and one that can have long term effects on the stability of the United States. The Secretary of Commerce and the Secretary of Defense have been directed by Congress to establish a comprehensive policy which would work toward negotiating the elimination of offsets.

S. 1379 amends and expands Section 309, Title III of the DPA relating to offset arrangements. The legislation specifies that the Commerce Secretary prepare the annual report concerning the effect of offsets on the defense industrial base in consultation with the Defense and Treasury secretaries and the United States Trade Representative, and that this report be used in future negotiations to minimize the negative effects of these arrangements. The bill also requires that any offset agreement exceeding $5,000,000 be reported to the Secretary of Commerce.

VII. CONCLUSION

NMTBA appreciates the attention the committee members are giving to the state of the industrial base of this country. Although we are hesitant to suggest that Congress micro-manage the Defense Production Act, it is apparent that you will have to use explicit legislative language to ensure the Act is fully utilized. The bill before you provides for a more secure America, and it does so without spending substantial new revenues.

NMTBA urges you to consider the implications a deteriorating machine tool industry presents to this nation and support Senator Dixon and the other cosponsors of S. 1379 in restoring the United States' capacity to produce items critical to our national security efficiently and effectively in peacetime and in a national emergency.

Thank you, Mr. Chairman. I would be pleased to respond to your questions.

Senator DIXON. Thank you, Mr. Moore.

We are delighted to have you here, Mr. Amacker. You are President and Chief Executive Officer of Leach Corp., representing the American Electronics Association. Delighted to have you here.

STATEMENT OF JEFFERSON Z. AMACKER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, LEACH CORP., REPRESENTING THE AMERICAN ELECTRONICS ASSOCIATION, ACCOMPANIED BY JOHN ENGLUND

Mr. AMACKER. Thank you very much, Senator. We are really pleased to be here.

My name is Jeff Amacker. I am the CEO of Leach Corp. in Buena Park, CA. We have about 750 employees dealing in both the defense and the commercial arena, about evenly split. We also compete in the international marketplace. Our revenues are about $60 million. Our primary products are power switching relays, circuit breakers, custom hybrid circuits, power contactors, and intelligent switching devices.

We are literally on everything that flies or moves in the Defense Department, all the way from the Space Shuttle to all of the missiles, right on to the Voyager probe and the Abrams tank. So everything that is high tech and needs a high reliability product, they come to Leach for.

We also have a 3-year exclusive arrangement with Boeing these days for 100 percent of their needs for their commercial airplanes. That is on the commercial side of our activity.

So we are the recognized principal supplier of power switching components to the aerospace industry.

I am here testifying today on behalf of the American Electronics Association. I have in the past been an officer of the Association. I have with me today John Englund, of the AEA. He is my colleague and has helped put together this presentation.

The AEA, as you may know, has 3500 member companies, including all segments of the industry, from defense, telecommunications, software, and has several large defense and commercial companies active as well as a large number of medium sized companies, such as my own.

The AEA and the electronics industry is one of the fastest growing sectors in the U.S. economy. They employ about 2.5 million people in the electronics industry. So that is more than autos and steel, and as you can see, it is a very vital manufacturing segment of our economy.

I have been participating in a series of grassroots roundtables out in California and throughout the country with other presidents and CEO's of defense companies, and we have been struggling with a lot of the questions that you have raised concerning the DPA.

I am a member of the Board of Directors of the Defense Presidents' Roundtable in California and chair, also, a group of other senior execs in that area.

While I am here on the behalf of the AEA, I am really here to tell you about a few things that are happening out in the marketplace that I believe bear on the DPA.

I would also today like to address several areas in my testimony. I would like to tell you about our view of the potential impact of the current domestic and international environment and the trends in the defense industry.

I would like to make some specific comments on your amendments to the DPA, sir, and the positions that the AEA has taken on these particular items.

And then, finally, I would like to tell you a little bit of the things that are happening in the industry. What is going on out there?

Well, it is a rough environment. We see this declining defense budget. We see a large number of foreign acquisitions of U.S. defense firms. We see a diminishing number of medium and small sized U.S. companies that sell to the U.S. Government for a lot of the reasons that were cited earlier.

We see a growing burden of volumes of government regulations that serve to make the industry less efficient and less competitive, and we see government audit staffs are increasing at the same time that the number of defense firms is going down, and while we are skinnying out our staffs we are having more and more auditors added. So it turns out that the auditors to contractor ratio is growing geometrically at this point in time.

This week's edition of Aviation Week contained an article depicting that defense and technology stocks are declining more rapidly than the general market, and that reflects investor awareness of the dim prospects of this industry and these stocks for the foreseeable future.

Also, a recent survey by Ernst & Young entitled "The U.S. Defense Industry"—perhaps you have read this—on key issues for the 1990's, surveyed industry executives, senior officials of the Defense Department and Congress and came to the conclusion that a significant majority agreed that conscious efforts must be made to prevent foreign suppliers from becoming predominant on the component subcontractor level, and that is really the thesis that I have here today.

A NATIONAL PLAN MUST BE DEVELOPED

Also, the U.S. should develop a national plan to identify the critical products and technologies most vulnerable, once again the critical technologies issue.

And the Department of Defense must move away from overemphasis on cost competition in awarding defense contracts and place greater emphasis on total quality, on maintainability and operability and contractors' past performance.

Those are points that I would like to make here today.

On a personal note, I believe some action is necessary. Let me tell you about a very recent near-term example.

Back in 1984 my company took a look at what the aircraft manufacturers, of the 1990s were going to need on their aircraft for power distribution systems and components, and we set out to spend our R&D money, our company private funds, on developing those products. By 1989 we had spent $7.2 million of private company moneys on this.

Then in 1989 we had delivered the world's only smart power systems to McDonnell Douglas Helicopter for the Apache helicopter, to Lockheed for the P3C laboratory, and to Boeing for the Air Force Advanced Technology Fighter simulator. These systems use our proprietary products that work over the military spec range.

Then in December of last year we supported a major U.S. prime contractor with a proposal that showed that these smart power systems could save the Navy many millions of dollars in reliability, installation costs, and weight savings on a new aircraft that that contractor was doing. So based on their study, they came to us for a sole source contract in May 1989 because no other source existed. We had spent our money. We were in front of the marketplace, and nobody else was in this business.

FIXED PRICE DEVELOPMENT CONTRACTS

However, they were passing on to us some things that just were not acceptable. They wanted to have us do a fixed price development contract, and they wanted to have us give them the nonrecurring and provided other severe terms and conditions that we just flat could not accept. So the airplane manufacturer then decided to go look for someone else that could provide this system.

Now, all other U.S. suppliers no-bid the fixed price development. They went out to the industry, and everyone else in the industry said, "we can't do this job." So we were available to do it.

However, in June of this year a British firm, Dowty Maritime Systems, bought a failing U.S. engineering firm in Arcadia, CA called Resdel Engineering, and they bid on this system based on the utility system that they had been flying on the B–2 bomber. They underbid my company by several million dollars, and they were awarded this fixed price development contract. So they were willing to sign up to the terms and conditions that U.S. firms were unwilling to do.

And the result of this was in September they were awarded the contract, even though they don't have the power controllers that they need to do this. They are not technically compliant. The prime strongly suggested to that firm that they come back to us to buy the piece parts that would go in to make the system compliant.

So the points I want to make out of this little parable are that the foreign cost of capital and favorable tax treatment allows these foreign firms to come in and buy up niches in the U.S. defense industry. They don't have to spend the time and the money developing proprietary businesses. They can just merely buy the niche.

Our defense industry is under heavy profit pressures from fixed price developments—I am talking about our prime contractors—they are losing money, and they are going to the cheapest bidder for our new aircraft whether technically compliant or not, and that is the concrete kite syndrome. It is cheap, but it won't fly. That is exactly what is happening out there.

My company as a result of this is no longer going to spend our profit dollars developing things for the U.S. Government. That is a policy of our company, and the U.S. taxpayer, who supported this development through tax credits and also supported this development through overheads on other military products that we are

providing, was also a loser on this job because he lost his investment, too, as a result of this.

So now we have a circumstance, very specific, where a foreign manufacturer now owns the power distribution system for this and perhaps all future U.S. aircraft. It is a relatively small niche, it is not a crucial technology, but it is an important thing. You can't fly airplanes without distributing the power in the aircraft.

FOREIGN SUPPLIERS

Now I am off on another tack. You know, there is general concern that foreign suppliers would become predominant at the component subcontractor level, and everyone is worried about the Japanese for electronic components such as ceramic substrates and the DRAMS, but I would like to voice a more specific concern at the aircraft systems level.

Our recent experiences on both this aircraft and another helicopter shows that two British companies, Smiths and Dowty, now own the power distribution subsystem for these aircraft and probably for other future aircraft because it is a small niche. Those companies were able to enter these markets because of special reciprocal agreements that between the United States and the United Kingdom on the use of NOFORN material. Said another way, in my opinion a French, Japanese, or German company wouldn't have been allowed to buy the company that had this system on the B–2 bomber and then allow them into this marketplace. So there was an arrangement there that allowed that to happen.

Likewise, in addition to the power distribution system, other British-owned systems on these new Navy aircraft are the fuel gauging system, the flight management computer, the Sonobuoy system, and the landing gear. We have five different things that are going to British firms, that they have bought into this business.

And the British firms that have major stakes in the U.S. defense contractor industry are Thorn EMI, Plessey, Dowty, Smiths, and Ferranti, just to name a few.

My thesis is this: if the British-owned firms are exempt from consideration as foreign-owned in discussion of our defense industrial base, we should consciously make that decision and decide whether they are going to be openly competing with us or not. Senator, they really can't compete with us, either technically or economically, but they can buy us.

Let me go on and make a couple of comments concerning the DPA itself.

The American Electronics Association supports the declaration of section 101 concerning the close relationship between national security and the defense industrial base concerns. We also endorse the idea of creating an Industrial Capabilities Committee as part of the section 201, which is an outgrowth of the recommendation of the Defense Science Board. We believe that would be a good forum for both primes and subcontractors to work the kind of problems that we are talking about here today.

And the AEA is also working hard to help the Defense Department implement the defense management review, and so forth.

So in summary, the development of criteria for foreign participation is needed.

We need some criteria that read:

Will the opportunity enhance the U.S. national security? Will the opportunity enhance the economic interest? Will the opportunity strengthen the U.S. technology?

So I am open for questions on this, sir.

[The complete prepared statement of Jefferson Z. Amacker follows:]

Testimony by Jefferson Z. Amacker

President and CEO

Leach Corporation

on behalf of the American Electronics Association

before the Senate Banking Committee

on the Defense Production Act

November 17, 1989

Good morning. My name is Jeff Amacker and I am the president and CEO of Leach Corporation, which employs just under 750 people in Buena Park, California. Leach is a privately-owned defense subcontractor as well as commercial supplier, with a fairly even split between our defense and commercial work. We also compete in the international marketplace. Our revenues for the year ended June 30th were $60M. Our primary products are power switching relays, both electromechanical and solid state, as well as solid state time delays, custom hybrid circuits, power contactors and intelligent switching devices. Leach is literally on everything that flies or moves from the cruise missiles, the space shuttle, the B-1, B-2, and F-16 aircraft to the Trident and Delta missiles, the Voyager probe and the Abrams tank. We also have a three (3) year exclusive arrangement to provide 100% of Boeing's needs for their commercial aircraft. We're the recognized principal supplier of power switching components to the Aerospace industry.

I am here testifying today on behalf of the American Electronics Association (AEA). AEA is the largest association representing the U.S. electronics industry. Our 3,500 member companies include all segments of the industry from defense, telecommunications, software, computer and instrument producers, to semiconductor equipment and material suppliers. AEA has a grassroots base around the country: while it has joint headquarters in Santa Clara and Washington, D.C., it also has twenty-one regional councils which provide the association with a unique ability to coalesce and communicate industry opinion. I have personally been honored to serve in the past as the Chairman of the AEA Orange County California council. The association represents a diverse membership, with large defense and commercial companies active, as well as a large number of medium-sized companies and small firms operating in both the defense and commercial marketplaces.

The U.S. electronics industry is one of the fastest growing sectors in the U.S. economy. It employs some 2.5 million

workers, more than autos or steel. Products produced by our industry are vital to our national security, and critical to the growth of many other sectors of our economy.

I have participated in a series of grassroots roundtables for Presidents and CEOs of defense companies over the last year, where we have struggled with many of the questions that are raised through the Defense Production Act. I am a member of the Board of Directors of the Defense Presidents' Roundtable. In addition, I chair a small group of senior executives in southern California that meets on a regular basis to discuss policy issues. I will do my best to also share some of their collective views with you today.

While I am here on behalf of AEA, I will also have some things to say that have not been formally sanctioned by the Association; these represent my company's experience and my own point of view. While neither AEA or Leach Corporation has all the answers to the many complex and difficult questions raised through the Defense Production Act amendments, we both have some unique perspectives on some of these issues, and we are pleased to be here before the Senate Banking Committee today to do our best to answer your questions and contribute what we can to your deliberations on the Defense Production Act.

I would like to address several areas in my testimony today:

1) our view of the potential impact of the current domestic and international environment and trends in the defense industry;

2) I will make some specific comments on Senator Dixon's amendments to the Defense Production Act and some of the positions that AEA has taken on these and related issues; and,

3) finally, I will weave in some anecdotal information with examples from my company, Leach Corporation and other senior executives whom I work with through AEA.

What is going on out there? What does the environment look like for U.S. defense companies? We are witnessing some ominous signs for the future of the U.S. defense industrial base:

-- a declining defense budget;

-- the large number of foreign acquisitions of U.S. defense companies;

-- the diminishing number of medium and small-sized U.S. companies that sell to the federal government;

-- the growing burden of volumes of government regulations that serve to make defense industry less efficient and competitive internationally; and,

-- government audit staffs are increasing at the same time the number of defense firms are shrinking, and also the number of professionals in the remaining firms are decreasing. The auditors/contract ratio is growing geometrically.

In summary, U.S. government actions and inactions cumulative over time have made the defense industrial base an increasingly unattractive market.

Perhaps most telling is the view of Wall Street on the prospects for the industry. We see headlines such as the one in Defense News recently that read, "Wall Street Analysts Anticipate Massive Consolidation of Defense Industry." Also, this week's edition of Aviation Week and Space Technology contained an article depicting that defense and aerospace stocks are declining more rapidly than the general market, reflecting investor awareness of the dim prospects for these stocks for the foreseeable future.

A recent survey completed by Ernst and Young entitled "The U.S. Defense Industry: Key Issues for the 1990s," surveyed industry executives, senior officials in the Office of the Secretary of Defense, congressional representatives and key staff members from the Armed Services, Budget and Appropriations Committees, and "defense-related independent opinion leaders." Let me summarize several of the conclusions that have a direct relationship to provisions in the Defense Production Act:

-- a significant majority "agreed that conscious efforts must be made to prevent foreign suppliers from becoming predominant on the component/subcontractor level...;"

-- for the U.S. to preserve a strong industrial base, streamlining the acquisition process is an absolute necessity;

-- the U.S. should develop a national plan "to identify the critical products and technologies most vulnerable to foreign control...;" and,

-- the Department of Defense "must move away from an overemphasis on cost competition in awarding defense contracts, and place greater emphasis on total product quality, maintainability and operability, and contractors' past performance."

As a subcontractor, I've had some direct personal experience in issues like offsets and the need to preserve some critical

technologies to ensure that the U.S. has the ability to mobilize quickly if necessary (one of the primary mandates of the Defense Production Act after its passage following the Korean War).

On a personal note, I believe some action is necessary. Let me recite a real-life example which I believe illustrates several broad and significant issues related to Defense production:

In 1984, Leach took a look at what the aircraft of the 1990's would need to power distribution systems and components, and set out spending our product development dollars to that end, developing proprietary products for those applications. By 1989, we had spent $7.2M of private company profits developing these smart power systems and components.

We were clearly the marketplace leader, by 1-1/2 to 2 years, according to all of our airframe customers who came to visit us and worked with us on specifying these smart power systems on their applications. By 1989, we had delivered the world's only smart power systems to McDonnell Douglas Helicopter for the Apache helicopter, to Lockheed for the P3C laboratory, and to Boeing for the USAF Advanced technology Fighter (ATF) simulator. These systems use the Leach proprietary solid state power controllers that perform over the military temperature ranges from -55 degrees C to +125 degrees C.

In December 1988, we supported a U.S. prime contractor with a proposal that showed smart power systems could save the Navy many millions of dollars in reliability, installation costs, and weight savings on a new aircraft it was developing. Based on their study, the airframe manufacturer came to Leach in May 1989 and asked us to bid the smart power system for the aircraft sole source, since no other source existed. We complied in June, but the contractor insisted that we bid the development costs firm fixed price. We refused, asking for a cost reimbursable development, and also disagreed with the severe terms and conditions the prime wanted to impose. The airframe manufacturer then decided to compete the system, looking for a supplier who would develop a system on a fixed price basis. All other U.S. suppliers no-bid the fixed price development. However, in June of this year, a British firm Dowty bought a failing U.S. engineering company in the Sonobuoy business, Resdel Engineering. They bid the new aircraft system to the U.S. prime based on a utility system they were flying on the B-2 bomber. They underbid my company by several million dollars on the fixed price development contract and in September were awarded the contract by the U.S. prime even though the power controllers they intend to buy do not work over the specified temperature ranges. The prime strongly suggested to Dowty that they come to us for the compliant power controllers.

The points I would like to make from this parable are:

1. Foreign cost of capital and favorable tax treatment allows these foreign firms to buy up niches in the U.S. defense industry.

2. They do not have to spend the time and money developing proprietary businesses; they can merely buy the niche.

3. Our defense industry under heavy profit pressures from fixed price developments is going to the cheapest bidder for our newest aircraft, whether technically compliant or not. (The concrete kite syndrome - cheap but it won't fly!)

4. My company will no longer spend our profit dollars doing proprietary product R & D work for U.S. government applications.

5. The U.S. taxpayer, who supported this development through tax credits and overheads on other military products, lost his investment also.

6. A foreign manufacturer now owns the power distribution system for this and perhaps all future U.S. aircraft. A relatively small niche.

OBSERVATIONS ON BRITISH BUY-UP OF U.S. AIRCRAFT SUBSYSTEMS

The recent Ernst and Young survey on key issues in the Defense Industry showed that there is a general concern about foreign supplies becoming predominant on the component/subcontractor level. Much of that concern is centered on our dependence on Japan for electronic components such as hybrid ceramic substrates and computer DRAM's.

I would like to voice a more specific concern at the aircraft systems level. Our recent experiences on both the new Navy aircraft I mentioned above and the McDonnell Apache helicopter shows that two British companies, Smiths and Dowty, now own the power distribution subsystem for those aircraft and (because of the relative size of the market) probably for all future U.S. aircraft. Those companies were able to enter those markets because of the special reciprocal agreement between the U.S. and U.K. governments concerning NOFORN classified information. Said another way, in my opinion, a French, Japanese, or German company would not have been allowed to buy a company making utility systems for the B-2 Stealth Bomber as Dowty was in the case of Resdel. Likewise, in addition to the power distribution system, other British owned systems on the new Navy aircraft are the fuel gauging system, the flight management computer, the Sonobuoy system and the landing gear.

British firms with major stakes in the U.S. defense subcontractor base are Thorn EMI, Plessey, Dowty, Smiths, and

Ferranti, to name a few.

My thesis is this: If British owned firms are exempt from consideration as foreign-owned in discussion of our defense industrial base, we should consciously make that decision and consider all British firms openly as part of the U.S. supplier base. The tax treatment of goodwill by the U.K. Government certainly gives British firms a distinct advantage over U.S. firms in the buy-up of U.S. defense firms. This also provides them with cash for "buying-in" on competitive contracts against U.S. manufacturers.

How could this be happening? Why has the U.S. defense subcontractor base become so weakened that these companies are easy targets for foreign acquisition, and also don't have the cash reserves to protect their markets? I would like to express my opinion on the effects of "Compulsory Competition" on the Defense Industrial Base:

1981 - 1986 B-1, F-16, F-18, F-15, F-14, A-6/Sikorsky, MDHC, Bell, Boeing

Many aircraft on order - all niches were undersupplied

Delivery more important than price

Prices were up in an undersupplied marketplace

- 30% vs. 70% of an order was ok because of higher prices and strapped capacity
- R&D was up as supplier developed proprietary products for the expanding market
- R&D was not being spent on manufacturing technology, but on product enhancements
- Manufacturers were driven to get more parts out the door with yesterday's tools and techniques

1986 - 1989

Military aircraft outlays dropped $2B/year from $33B in 1987 to less than $27B in 1990.

Subcontractor niches are now over capacity

Severe price cutting has been taking place on both new aircraft and logistics bids

As business bases shrink, fixed costs required managing

"downward

In parallel, the primes passing on expensive and onerous flow-downs

Fixed price developments
Audit requirements
Non recurring cost absorption
Tooling cost absorption
Five year warranties
Unlimited rights in data
Liquidated damages for delays

The industry is greatly weakened financially, particularly at the subcontractor level. As an example, in part of our niche there are three suppliers for a $50M total market. Competition is fierce - we've abandoned the non-differentiating logistics market and let the other competitors fight it out. As a result, one of them is nearing bankruptcy and the other is losing money. This niche will consolidate into 2 suppliers next year and prices will go up.

Conclusion: Although the short term effect of artificial "compulsory competition" was to drive down prices, the longer term effect has been industry niche oversupply, weakening all the competitors, thus allowing more foreign buyout of the U.S. defense industrial base. The result from this policy will be generally large price increases across the board from the surviving suppliers.

What can be done about this?

Commercial customers like Boeing, Gulfstream, and DeHavilland are greatly reducing their number of partnerships with "Best Value" suppliers. And at the second and third tier, many small to medium size enlightened defense manufacturers are doing the same thing with their supplier base.

Commercial companies like Boeing are now able to go to World Class Manufacturing (Just In Time) efficiencies which requires partnering with fewer suppliers on a "Best Value" basis, while large defense contractors are forbidden from doing this by the incorrect interpretation of CICA which places too great an emphasis upon lowest price.

The Department of Defense finally embraced Total Quality Management (TQM) in 1987, and the airframes who already had their own programs, have now joined steps with them in promoting TQM. It is absolutely the right thing to do, and it is the cornerstone to getting defense contractor productivity up dramatically. There is a major problem with this, however. Total Quality suppliers, whether airframes, 2nd or 3rd tier, must be rewarded

and given incentives on a life cycle cost basis, not just acquisition cost. This requires awarding contracts by giving greater weight to quality and delivery and less to price only, and forming a sole source partnership with those "Best Value" suppliers and their customers. But GAO's interpretation of the Competition in Contracting Act (CICA) does not encourage such a partnership! This interpretation places too much emphasis on low price and not enough on quality factors. Large defense contractors are not permitted to award contracts based on anything other than lowest price (such as quality and delivery).

What Do We Suggest the Senate Do About It?

1. Support the Defense Manufacturing Board. Defense manufacturing production improvements are the key to supplying more defense for fewer taxpayer dollars.

2. Resolve the conflict between the interpretation of CICA and TQM to allow partnership with "Best Value" suppliers. This will enable U.S. defense firms to implement World Class Manufacturing.

3. Make a determination as to whether U.S. trading partners (e.g. U.K., Germany, Japan) are part of the Defense Industrial Base or not, and set up appropriate controls.

Let me now give a broad AEA perspective on some elements of the Defense Production Act amendments offered by Sen. Dixon.

On the anti-trust immunity which would broaden the anti-trust provisions of the DPA, it appears as if this provision would make it easier for companies to avoid costly litigation by converting the anti-trust defense into an immunity. AEA has taken a strong position in favor of relaxing the anti-trust laws to allow companies to engage in joint production, but we have argued for de-trebling of damages as opposed to immunity. We have been working through industry's Joint Manufacturing Coalition (whose members include AEA, the Computer and Business Equipment Manufacturers Association, the National Association of Manufacturers, the Electronic Industries Association among others). The effort of this group has focused upon the Judiciary Committee. The provisions on anti-trust in S. 1379 should be closely coordinated with the efforts that are ongoing in the Judiciary Committee.

AEA supports the declaration in S. 1359 (Section 101) which reflects the close relationship between national security and defense industrial base concerns. Section 101 makes the point that the "vitality of the industrial and technological base of the United States is the foundation of national security. AEA agrees, and argued strongly before several Congressional committees that the Secretary of Commerce should play a major

role in U.S. decisions involving both defense and economic factors. In particular, we took this position on the FSX fighter aircraft deal and were pleased that the Administration made revisions to the deal and pledged that economic and technology interests would be weighed carefully along with national security considerations in future deals.

As I mentioned earlier, we also have concerns about foreign acquisition of U.S. defense companies but have not yet taken an association position on the Exon-Florio provisions. Our reading of the Dixon bill suggests that it would give the President more flexibility in making the determination of whether a proposed acquisition or merger could threaten to impair national security.

Speaking from personal experience, as a company that has seen some offset agreements flow-down to a subcontractor like Leach Corporation, we are concerned about the growing prevalence of offsets and their impact upon the defense subcontracting base (Section 114 of the Dixon bill). But we have not yet figured out the best solution to the problem, a solution that protects our subcontracting base while also recognizing the realities of the international marketplace. While we need to get a better handle on the scale and significance of our offset deals, we must ensure that we do not increase the paperwork requirements for our companies.

We endorse the idea of creating an Industrial Capabilities Committee (Section 201) which is an outgrowth of a recommendation of the Defense Science Board's 1988 Task Force on the Defense Industrial and Technology Base. In particular, we like the idea of the Committee doing regular reviews of major government policies and their impact on the defense industrial and technology base as well as developing a "process for periodically assessing U.S. technological advancement and production capabilities."

The AEA is working hard to help the Defense Department implement the Defense Management Review and are involved in making proposals on the "zero-based review of regulations" currently underway. To provide you with a small example of what can help industry be more productive that lies squarely in the domain of Congress, raise the threshold set in the Truth in Negotiations Act which requires all companies -- and the burden falls on the subcontracting base -- from the current $100,000 set in 1962 to $1 million. At the very least, factor in inflation for those years. And make it easier for us to sell commercial products -- and modified commercial products -- to the Department of Defense. Often the most advanced technology is the least expensive technology, if it is bought off-the-shelf. After all, our view is that in the electronics industry particularly, there isn't a clear-cut economic choice between guns and

butter. It is the broad industrial base that the U.S. must count on -- for its economic future, as well as for its defense strength.

We believe imposing fewer unnecessary regulations upon contractors, and making it easier for U.S. companies to sell commercial -- and modified commercial -- products to the Department of Defense is the cleanest way to help make our companies more competitive in bidding on contracts. The U.S. government should become more of a "world class customer" and employ commercial acquisition practices, which should also become a part of the Defense Department's Total Quality Management program. Government regulations need to clearly recognize that products proposed for defense use which are derived from or comparable to commercial products should be purchased using commercial-like methods. This would significantly broaden domestic industry's interest in defense acquisitions.

In Section 221 on "Evaluation of Offers from Foreign Sources," we have some concerns about how to objectively assess "price evaluation factors" to counter the "unfair advantage" of foreign companies. U.S. defense companies certainly do suffer competitively as a result of some U.S. laws and regulations -- whether legitimate or not. But how to quantify costs on specific products and bids which are associated with environmental protection, the drug-free workplace, and small business participation, particularly since our experience has been that the foreign firms are acquiring market share by buying into U.S. government contracts? The competition is not cost-based.

Along the same lines, we also agree with the need to encourage investment in advanced technologies. Manufacturing technology is a specific area where such incentives can do a lot of good. Create incentives for companies to exploit dual-use technologies, and reward them for transferring defense technology to the commercial marketplace. The way the current system is structured, it is almost impossible for companies to exploit dual-use technologies -- we have a whole series of disincentives imposed upon us. This committee should monitor carefully the study recently begun at the Center for Strategic and International Studies (headed up by Jacques Gansler) that is addressing this issue directly. Its proposals will be based upon the findings of a series of case studies on the obstacles to the successful transfer of defense products to the commercial market, and vice-versa.

Also, more not less emphasis needs to be placed upon manufacturing prowess. The Administration should expand the role of the Defense Manufacturing Board and Sematech, not curtail them. Many of the CEOs of the American Electronics Association (AEA) have argued strongly in favor of an expanded DMB. To underscore this point, a recent productivity survey sponsored by

AEA found that defense subcontractors are not implementing quality and productivity measures in as timely and aggressive a manner as is needed. A strengthened Defense Manufacturing Board could provide leadership in areas of manufacturing quality and productivity, essential for improving the overall U.S. industrial base.

We have supported the effort by Senator Bingaman last year which resulted in an annual report to Congress on critical technologies. This effort and process should be carefully honed. It is important to make certain that such an effort does not become a way to "pick winners and losers" and to force some form of "industrial policy" upon the Administration. In addition, it is important not to allow such a list of critical technologies to automatically become the base-line for export controls, either. The point of a focus on critical technologies is to husband our resources carefully and get the most bang for the buck in both the defense and commercial markets.

I want to leave you with a challenge. One of the thorniest issues that this Committee must confront are some of the definitions in the bill and their implications. How, for example, to define "domestic source?" My personal opinion is that a domestic source is owned by U.S. interests and manufactures most of its product in this country. But this is not an easy issue. How to address the rapidly changing realities of the international marketplace? A national economic interest test might include:

-- whether the company has R&D/manufacturing facilities in the U.S.;

-- whether the company respects trade law, including dumping, intellectual property protection, export controls; and

-- the extent to which the company can contribute valuable technological information to the project.

The development of such criteria for foreign participation decisions (and defining "domestic source") must be based upon three guiding factors:

1) Will the opportunity enhance U.S. national security?

2) Will the opportunity enhance (or not erode) U.S. economic interests?

3) Will the opportunity strengthen (or not erode) U.S. technology?

Thank you, and I would be happy to try to answer any of your questions.

Senator DIXON. Thank you very much, Mr. Amacker.

Mr. Paul J. Gross, you are the chairman of the Proprietary Industries Association. Delighted to have you here, Mr. Gross.

STATEMENT OF PAUL J. GROSS, CHAIRMAN, PROPRIETARY INDUSTRIES ASSOCIATION, GLENDALE, CA

Mr. GROSS. Thank you, Mr. Chairman. Good morning.

I am senior vice president for operations of Fairchild Aerospace Defense Fastener Co. My company designs, manufactures, and sells special nuts and bolts that hold together virtually every commercial and military aircraft in the free world.

This morning, though, I am appearing in my role as chairman of the Board of Proprietary Industries Association, or PIA.

PIA is just a 4-year-old organization of 82 innovative defense subcontractors who invent high technology aerospace components, subassemblies, and subsystems that have helped maintain America's technical superiority. Membership covers a wide range of products and company size, and approximately half of our members are small businesses, although we also have medium and large company members.

The common thread that brings us together is our ability and desire to invent new technology for the American military, often 100 percent at private expense, if we can see a reasonable return on investment. PIA was organized in the mid-1980's because procurement legislation regulations, intended to accomplish other goals, also severely dampened the incentive for innovative contractors to invent new technology for defense purposes, and I must say nothing galvanized us quite like Congressman Kasich's 7-year proposal. We were really against that.

DEFENSE INNOVATIVE SUBCONTRACTORS

We appreciate the committee's recognition that innovative subcontractors play a strategic role in the defense industrial base. The numerous studies cited in your invitation to me all give recognition to the importance of subcontractors. Five years ago I was convinced that the defense policymaking community was unaware of the innovative subcontractors.

However, attention to and recognition of the importance of the defense innovative subcontractor is a two-edged sword. The well-intended sweeping changes to the defense procurement laws and regulations in the last 4 years have changed our businesses. As the military services became more aware of the lower tier subcontractors, we find that our businesses are increasingly regulated by the Government through the prime contractors. With increased regulation and the substantive policy changes I mentioned comes more paperwork, increased administrative costs, more complex ways of doing business, criminalization of administrative errors, and a negative impact on return of investment.

To the innovative subcontractor, worst of all, though, are disincentives that have emerged, so that our best technology, often developed at private expense, is less likely to be made available to the military.

Many PIA members have responded by adopting strategies to divert our investments and energies into nondefense markets when possible, and long-term reliable suppliers to defense markets are refusing defense business more often, as was just said.

When these companies don't want to do business in the defense market, the defense industrial base is deprived of their investments, their products, and their capability, and as we leave the market, the defense industrial base is deprived of our surge capacity as well for all practical purposes.

The flight of the subcontractor base is important to the issue before this committee, since you are charged with assessing the country's ability to mobilize in times of conflict. Mobilization is a real concern, and it is a complex issue. I believe that the CSIS report, "Deterrence in Decay," summarized the situation pretty well.

It suggested three objectives for national security policy—peacetime efficiency, technological competitiveness/superiority, and crisis flexibility. The report made it clear that we are not meeting these objectives with our present splintered, piecemeal approach to defense policy and management. As a result, we have an unhealthy defense industrial base that is in danger of not meeting any of these objectives.

Ideally, the Nation's manufacturing sector would invest in research, development, and design of technologically advanced products with unique military applications, and then manufacture quality, highly reliable products efficiently, and have manufacturing capacity usefully devoted to commercial markets in times of peace but easily adaptable to supplying defense in times of conflict.

However, instead, we have an acquisition system that discourages private investment in research, development, and design as well as manufacturing processes for defense use, at the same time that we have built our national security policy and strategy on technical superiority.

COMPLEX REGULATORY STRUCTURE

We also have a complex regulatory structure that in and of itself is a disincentive to participate in defense markets.

We have a seeming inability to maximize our military use of suitable product available in the commercial sector, which would in turn maximize the flexibility of our manufacturing capability.

And of course we have shrinking procurement dollars with which to leverage our defense investment.

We have policies which seek to expand the number of companies that would participate in the market through CKA at the time when the defense market may not be big enough to economically sustain the number of companies we presently have. This is occurring at the same time when our best models for efficient, quality manufacturing practice argue for fewer suppliers and long-term relationships between customer and supplier.

Profit policies, competition policies, costly paperwork and too few dollars chasing too many weapons programs all work to discourage innovative subcontractors from taking the risks of participating in the defense market.

I think my own experience is an example of the current system working at cross purposes. Until a few months ago, the aerospace fastener company that I am a part of was dependent on U.S. defense spending for 70 percent of our business. For several years we pursued multiple courses of action to improve what looked like a dismal future.

One of those strategies was for me to devote time to help improve legislative and regulatory structure that impacts our business, and we certainly appreciate your help in this area, especially on data rights.

Another was carried out just this summer, when we merged with a complementary fastener company, an action that overnight reduced our military dependence to 40 percent from 70 percent. Even better, it provided a lower cost manufacturing base so we can compete by selling our older technology to the military at the lowest price. Best of all, this merger provides a better business outlet for our innovations that are suitable for the commercial aerospace market.

From the perspective of a flexible manufacturing base, I am sure that our current status pleases you as well as us, but there is a downside for the defense industrial base. Our investment in innovation will move toward the commercial side. There are different forces driving commercial fastener needs and innovation. That means that the next better mousetrap we develop will not necessarily be adaptable to specialized defense applications.

Aerospace fasteners are not all generic products. For the military we have developed specialized nuts and bolts designed to withstand the extreme stress of the military environment as well as meet other unique military needs like Stealth. These are expensive, high risk investments that have contributed directly to making our military aircraft the most capable by a margin in the world.

If we don't innovate and sell to the defense aerospace community in peacetime, in time of conflict our product and capability will be less useful. This could happen if acquisition culture and practices are unchanged.

The initiatives to buy more commercial and nondevelopmental items will help and a lot of the other initiatives on commercial style practice will help, but that doesn't address the issue that there are always going to be a large number of unique items just for military use, and you have to encourage that investment.

So I would suggest, in summary, that efforts to segregate mobilization and surge requirements from the way we conduct business in the defense sector will be expensive and possibly counterproductive. In fact, for innovative subcontractors, improving the acquisition system to include incentives for innovation would be a far greater inducement to participation than subsidies.

Having said that, I realize that this committee has responsibility to reauthorize DPA and other committees have responsibilities for fixing the acquisition system, and fortunately you are on both. Respectfully, we would recommend that you act jointly.

We have made comments separately to S. 1379. We generally support the issues it raises.

Thank you.

[The complete prepared statement of Paul J. Gross follows:]

STATEMENT OF PAUL J. GROSS

CHAIRMAN OF THE BOARD OF DIRECTORS

THE PROPRIETARY INDUSTRIES ASSOCIATION

on behalf of

PIA

Before the

UNITED STATE SENATE COMMITTEE ON BANKING, HOUSING

and URBAN AFFAIRS

NOVEMBER 17, 1989

on

S. 1379, "THE DEFENSE PRODUCTION ACT AMENDMENTS OF 1989"

GOOD MORNING, MR. CHAIRMAN, SENATORS, LADIES AND GENTLEMEN. MY NAME IS PAUL J. GROSS. I'M PRESENTLY SENIOR VICE PRESIDENT FOR OPERATIONS OF THE FAIRCHILD AEROSPACE DEFENSE FASTENER COMPANY. MY COMPANY DESIGNS, MANUFACTURES, AND MARKETS SPECIAL NUTS AND BOLTS THAT HOLD TOGETHER BOTH COMMERCIAL AND MILITARY AIRPLANES.

THIS MORNING I AM APPEARING IN MY ROLE AS CHAIRMAN OF THE BOARD OF THE PROPRIETARY INDUSTRIES ASSOCIATION OR PIA. PIA IS A FOUR-YEAR OLD ASSOCIATION OF 82 INNOVATIVE DEFENSE SUBCONTRACTORS WHO INVENT STATE OF THE ART COMPONENTS, SUBASSEMBLIES AND SUBSYSTEMS THAT HAVE HELPED TO MAINTAIN AMERICA'S TECHNICAL SUPERIORITY. MEMBERSHIP COVERS A WIDE ARRAY OF PRODUCTS AND COMPANY SIZE. APPROXIMATELY HALF OF OUR MEMBERS ARE SMALL BUSINESSES, BUT WE ALSO HAVE MEDIUM AND LARGE COMPANY MEMBERS.

THE COMMON THREAD THAT BRINGS US TOGETHER IS OUR ABILITY AND DESIRE TO INVENT NEW TECHNOLOGY FOR THE AMERICAN MILITARY (OFTEN 100% AT PRIVATE EXPENSE) IF WE CAN SEE A REASONABLE CHANCE FOR RETURN ON INVESTMENT. PIA WAS ORGANIZED IN THE MID 80S BECAUSE PROCUREMENT LEGISLATION AND REGULATIONS INTENDED TO ACCOMPLISH OTHER GOALS ALSO SEVERELY DAMPENED THE INCENTIVE FOR INNOVATIVE SUBCONTRACTORS TO INVENT NEW TECHNOLOGY FOR DEFENSE PURPOSES.

WE APPRECIATE THE COMMITTEE'S RECOGNITION THAT SUBCONTRACTORS PLAY A STRATEGIC ROLE IN THE DEFENSE INDUSTRIAL BASE. THE NUMEROUS STUDIES CITED IN YOUR INVITATION TO ME ALL GIVE RECOGNITION TO THE IMPORTANCE OF SUBCONTRACTORS. FIVE YEARS AGO, I WAS CONVINCED THAT THE DEFENSE POLICY MAKING COMMUNITY WAS UNAWARE OF THE SUBCONTRACTOR.

HOWEVER, ATTENTION TO AND RECOGNITION OF THE IMPORTANCE OF THE DEFENSE SUBCONTRACTOR IS A TWO-EDGED SWORD. THE WELL-INTENDED SWEEPING CHANGES TO DEFENSE PROCUREMENT LAWS AND REGULATIONS OF THE LAST FOUR YEARS HAVE CHANGED OUR BUSINESSES. AS THE MILITARY SERVICES BECOME MORE AWARE OF THE LOWER TIER SUBCONTRACTORS, WE FIND THAT OUR BUSINESSES ARE INCREASINGLY REGULATED BY THE GOVERNMENT, THROUGH OUR PRIME CONTRACTORS. WITH INCREASED REGULATION AND THE SUBSTANTIVE POLICY CHANGES I MENTIONED COMES MORE PAPERWORK, INCREASED ADMINISTRATIVE COST, MORE COMPLEX WAYS OF DOING BUSINESS AND A NEGATIVE IMPACT ON RETURN ON INVESTMENT.

MANY PIA MEMBERS HAVE RESPONDED BY DIVERTING OUR INVESTMENTS AND ENERGIES INTO NON-DEFENSE MARKETS WHEN POSSIBLE AND LONG-TERM RELIABLE SUPPLIERS TO DEFENSE MARKETS ARE REFUSING DEFENSE BUSINESS MORE OFTEN. WHEN THESE COMPANIES REJECT SALES TO DEFENSE MARKETS, THE DEFENSE INDUSTRIAL BASE IS DEPRIVED OF THEIR INVESTMENTS, THEIR PRODUCTS, AND THEIR CAPABILITY. AS WE LEAVE THE MARKET, AS

THE CSIS STUDY POINTS OUT, THE DEFENSE INDUSTRIAL BASE IS DEPRIVED OF OUR CAPACITY AS WELL, FOR ALL PRACTICAL PURPOSES.

THE FLIGHT OF THE SUBCONTRACTOR BASE IS IMPORTANT TO THE ISSUES BEFORE THIS COMMITTEE TODAY SINCE YOU ARE CHARGED WITH ASSESSING OUR COUNTRY'S ABILITY TO MOBILIZE IN TIMES OF CONFLICT. MOBILIZATION IS A REAL CONCERN AND IT IS A COMPLEX TASK. I BELIEVE THE CSIS REPORT SUMMARIZED THE SITUATION PRETTY WELL. IF WE ACCEPT THE THREE OBJECTIVES OF NATIONAL SECURITY POLICY SUGGESTED BY "DETERRENCE IN DECAY" -- PEACETIME EFFICIENCY, TECHNOLOGICAL COMPETITIVENESS AND SUPERIORITY, AND CRISIS FLEXIBILITY -- IT IS CLEAR THAT THE HEALTH OF THE DEFENSE INDUSTRIAL BASE CANNOT BE IMPROVED BY ADDRESSING ONLY ONE OBJECTIVE, AND AN UNHEALTHY DEFENSE INDUSTRIAL BASE INCREASES THE RISK OF NOT BEING ABLE TO MOBILIZE OR ENGAGE IN SURGE PRODUCTION IN A TIMELY WAY.

IDEALLY, THE NATION'S MANUFACTURING SECTOR WOULD INVEST IN RESEARCH, DEVELOPMENT AND DESIGN OF TECHNOLOGICALLY ADVANCED PRODUCTS WITH UNIQUE MILITARY APPLICATIONS, MANUFACTURE QUALITY, HIGHLY RELIABLE PRODUCTS EFFICIENTLY, AND HAVE MANUFACTURING CAPACITY USEFULLY DEVOTED TO COMMERCIAL MARKETS IN TIMES OF PEACE BUT EASILY ADAPTABLE TO SUPPLYING DEFENSE IN TIMES OF CONFLICT.

HOWEVER, WE HAVE:

- AN ACQUISITION SYSTEM THAT DISCOURAGES **PRIVATE** INVESTMENT IN RESEARCH, DEVELOPMENT, AND DESIGN, AS WELL AS MANUFACTURING PROCESS FOR DEFENSE USE, AT THE SAME TIME THAT WE'VE BUILT OUR NATIONAL SECURITY STRATEGY ON TECHNICAL SUPERIORITY;
- A COMPLEX REGULATORY STRUCTURE THAT IN AND OF ITSELF IS A DISINCENTIVE TO SELL TO DEFENSE MARKETS;
- A SEEMING INABILITY TO MAXIMIZE OUR MILITARY USE OF PRODUCT AVAILABLE IN THE COMMERCIAL SECTOR WHICH WOULD IN TURN, MAXIMIZE THE FLEXIBILITY OF OUR MANUFACTURING CAPACITY;
- LIMITED DOLLARS WITH WHICH TO LEVERAGE OUR DEFENSE INVESTMENT; AND
- POLICIES WHICH SEEK TO EXPAND THE NUMBER OF COMPANIES THAT WILL PARTICIPATE IN THE MARKET, AT A TIME WHEN THE DEFENSE MARKET MAY NOT BE BIG ENOUGH TO SUSTAIN A LARGE NUMBER OF PARTICIPANTS IN A WAY THAT MAKES ECONOMIC SENSE -- AND AT A TIME WHEN OUR BEST MODELS OF EFFICIENT, QUALITY MANUFACTURING PRACTICE ARGUE FOR FEWER SUPPLIERS AND LONG TERM RELATIONSHIPS BETWEEN CUSTOMER AND SUPPLIER.

PROFIT POLICIES, COMPETITION POLICIES, COSTLY PAPERWORK AND TOO-FEW DOLLARS CHASING TOO MANY WEAPONS PROGRAMS ALL WORK TO DISCOURAGE INNOVATIVE SUBCONTRACTORS FROM TAKING THE RISKS OF PARTICIPATING IN THE DEFENSE MARKET.

MY OWN EXPERIENCE IS AN EXAMPLE, I BELIEVE, OF THE CURRENT SYSTEM WORKING AT CROSS PURPOSES. UP UNTIL THIS PAST

SUMMER, THE AEROSPACE FASTENER COMPANY THAT I AM PART OF WAS DEPENDENT ON U.S. DEFENSE SPENDING FOR 70% OF OUR BUSINESS. FOR SEVERAL YEARS WE PURSUED MULTIPLE COURSES OF ACTION TO IMPROVE WHAT LOOKED LIKE A DISMAL FUTURE. ONE OF THOSE STRATEGIES WAS FOR ME TO DEVOTE A LOT OF MY TIME TO HELP IMPROVE THE LEGISLATIVE AND REGULATORY STRUCTURE THAT IMPACTS ON THE BUSINESS. THIS SUMMER, HOWEVER, WE DECIDED TO ACQUIRE ANOTHER FASTENER COMPANY -- AN ACTION THAT OVERNIGHT REDUCED OUR MILITARY DEPENDENCE TO 40%. EVEN BETTER IT PROVIDE A LOWER COST MANUFACTURING BASE SO WE CAN COMPETE IN SELLING OUR OLDER TECHNOLOGY TO THE MILITARY AT THE LOWEST PRICE. BEST OF ALL, THIS MERGER PROVIDES A BETTER BUSINESS OUTLET FOR OUR INNOVATIONS INTO THE COMMERCIAL AEROSPACE MARKET.

FROM THE PERSPECTIVE OF A FLEXIBLE MANUFACTURING BASE, I'M SURE THAT OUR CURRENT STATUS PLEASES YOU AS WELL AS US. BUT THERE IS A DOWNSIDE FOR THE DEFENSE INDUSTRIAL BASE. OUR INVESTMENT IN INNOVATION WILL GO THE COMMERCIAL SIDE OF THE HOUSE NOW. THERE ARE DIFFERENT FORCES DRIVING COMMERCIAL FASTENER NEEDS AND INNOVATION. THAT MEANS THAT THE NEXT "BETTER MOUSETRAP" WE DEVELOP WILL NOT BE ADAPTED TO SPECIALIZED DEFENSE APPLICATIONS. AEROSPACE FASTENERS ARE NOT ALL GENERIC PRODUCTS. WE MANUFACTURE SPECIALIZED NUTS AND BOLTS FROM EXOTIC MATERIALS, DESIGNED TO WITHSTAND THE EXTREME STRESS OF A MILITARY ENVIRONMENT ON THE DEFENSE SIDE OF THE HOUSE.

IF I DON'T INNOVATE FOR AND SELL TO THE DEFENSE AEROSPACE COMMUNITY IN PEACETIME, IN TIMES OF CONFLICT MY PRODUCT AND MY MANUFACTURING CAPACITY ARE LARGELY USELESS FOR SURGE AND/OR MOBILIZATION NEEDS, ON ANYTHING RESEMBLING A TIMELY BASIS, IF THE ACQUISITION CULTURE AND PRACTICES ARE UNCHANGED. IN ADDITION, THE UNIQUE TECHNICAL CONTRIBUTION MY COMPANY'S INNOVATIONS HAVE MADE WILL BE FEWER, IF EXISTENT AT ALL.

THE INITIATIVES TO BUY MORE COMMERCIAL AND NON-DEVELOPMENTAL ITEMS WILL HELP, AS WILL INITIATIVES TO IMPLEMENT COMMERCIAL-STYLE PRACTICE. EVEN IF TOTALLY SUCCESSFUL, HOWEVER, ALONE THESE INITIATIVES WILL NOT ADDRESS THE VERY REAL FACT THAT THERE IS A PLACE FOR MILITARY UNIQUE ITEMS AND MANUFACTURERS OF THOSE ITEMS AND THAT THOSE SUPPLIERS HAVE ALSO BEEN DISCOURAGED FROM INVESTING IN DEFENSE RELATED INNOVATION.

SO I WOULD SUGGEST TO YOU THAT EFFORTS TO SEGREGATE MOBILIZATION AND SURGE REQUIREMENTS AND PLANNING, WHICH ARE A VITAL PART OF OUR NATIONAL SECURITY POLICY, FROM THE WAY WE CONDUCT BUSINESS IN THE DEFENSE SECTOR WILL BE EXPENSIVE AND POSSIBLY COUNTERPRODUCTIVE. IN FACT, FOR OUR SEGMENT OF THE INDUSTRY, IMPROVING THE ACQUISITION SYSTEM TO INCLUDE INCENTIVES FOR INNOVATION WOULD BE A FAR GREATER INDUCEMENT

TO PARTICIPATION IN THE MARKET THAN SUBSIDIES.

HAVING SAID THAT, I REALIZE THAT THIS COMMITTEE HAS A RESPONSIBILITY TO REAUTHORIZE THE DEFENSE PRODUCTION ACT AND OTHER COMMITTEES HAVE RESPONSIBILITY FOR FIXING THE ACQUISITION SYSTEM. RESPECTIVELY WE WOULD RECOMMEND THAT YOU ACT JOINTLY.

OUR SPECIFIC COMMENTS ON S. 1379 FOLLOW. BEFORE I SUMMARIZE THOSE COMMENTS, I HOPE IT GOES WITHOUT SAYING THAT PIA WILL GLADLY WORK WITH THE COMMITTEE MEMBERS AND STAFF TO REFINE AND IMPROVE S. 1379.

ATTACHMENT
NOVEMBER 17, 1989

PROPRIETARY INDUSTRIES ASSOCIATION'S SPECIFIC COMMENTS ON S.1379, "DEFENSE PRODUCTION ACT AMENDMENTS OF 1989"

1) Section 111 of the bill. This section expands the reach of the existing authorities under title III of the Defense Production Act by permitting them to be used to "expand production and deliveries of services under a Government contract for the procurement of industrial resources or a critical technology for the national defense."

It is only when the acquisition system fails to provide an attractive market for a critical national security function should Title III of the Defense Production Act be considered for use. Further, if it is used, the Defense Department should carefully review the factual situation to determine whether there is some larger systemic explanation for the inability to attract participation in that area but for the use of title III funding.

While we recognize and support this additional authority, we encourage the Committee to assure that the authority is tied to:

1) a finding by the mobilization planning apparatus that a gap in domestic capability does indeed exist and that a critical resource or technology for mobilization is involved;
2) a thorough review of the economic impact of expanding production if it entails the creation of additional manufacturing capacity or additional facilities. Excess capacity is expensive and the fund established by S. 1379 is not large enough to sustain excess capacity and the private sector should not be expected to do so; and
3) a right of first refusal for existing suppliers to fill the government's mobilization needs. It should also be clear that if alternate sources of expanded production using title III assistance are required, the critical industrial resource or critical technology may be a functionally interchangeable resource or technology.

In addition to our concern that peacetime needs and mobilization needs be considered jointly, frankly we are concerned that this authority could be misused in today's acquisition environment. The authority to create additional sources of production could be used to create competitive

pressures on price by "cloning." Vague and unspecified mobilization needs are often cited as a reason for government demands for intellectual property rights in our trade secrets. That has been one of the reasons the innovative subcontractor has sought other business.

The Congress must also recognize that by expanding the use of title III authority beyond supplies and services into areas of "critical technology," we are venturing into a new area of government attention. While it is appropriate that the title III authority be available for such needs, the "old ways" of buying goods and services may not be applicable to the support needed for such technology.

2) Section 114(c) of the bill. This section would require any U.S. firm which enters into a contract for the sale of a weapons system or defense-related item to a foreign entity that is subject to an offset agreement in excess of $5 million, to furnish a copy of that agreement to the Government. It is understandable that this section has created some controversy.

Offsets are a way of life in the international marketplace. Until recently, it has become an integral part of the negotiations of the prime contract transaction. Legislation which Senator Dixon sponsored in 1988 and again this year has been included in Department of Defense Authorization Acts to require the Secretary of Defense, and others, to pay particular notice to the impact of offsets in defense memoranda of understandings, and in certain foreign sales. We believe that that high-level, government-to-government attention is essential to the long-term resolution of offset agreements.

In addition, the President and the Secretary of Defense have demonstrated their concerns with specific offset arrangements as part of proposed international transactions. Again, we applaud that review on a bilateral basis, and on a specific transaction by transaction basis.

But we in the subcontract tier have a different view of offsets than our primes may have. Frequently, a prime contractor will enter into an offset arrangement as a condition for receiving the order. But the compliance with the offset arrangement is frequently "shared" with the subcontractors on either a firm or "best-efforts" basis, without our ability to be party to the negotiations.

Finally, regardless of the merits of offsets, we believe the threshold for notice provided in the bill to be too low, and we do not believe that it is prudent for the contractor to submit an actual copy of an offset agreement to the Government. These "commercial terms" should be kept confidential, although we recognize that if reporting is to

be retained, some summary of the provisions would be required. While there is a provision in the legislation that requires the Department of Commerce regulations to recognize the need to protect the proprietary nature of any such data submitted, we believe the law should be more explicit and provide a specific exemption from disclosure such that it would qualify under subsection (b)(3) of the Freedom of Information Act. Here, however, the subcontractor frequently has no idea concerning the terms and conditions of the offset arrangements negotiated by the prime contractor. Frankly, some PIA member subcontractors see this government notification as one of the few direct and truthful sources of information about offsets which may affect them directly, and which may guide them in determining whether any commercial rights or remedies may be available.

3) Section 122 of the bill. This section provides definitions for the terms used in the Defense Production Act. While we are reviewing these definitions as they would be used in the Defense Production Act more thoroughly, we note, for example, that the term "defense contractor" does not include the term "subcontractor". Currently, section 301 explicitly recognizes subcontractors. Sections 302 and 303 appear to permit businesses which perform as subcontractors to receive assistance available under those sections. As the Committee knows, over 50% of all DoD prime contract dollars are "flowed down" to subcontractors. Most of the innovation is done by subcontractors. Yet, because the definition in the law refers only to a "defense contractor", and that portion of the definition is not changed by S. 1379, it appears that none of the other expanded Federal assistance which the DPA amendments are seeking would be, or could be, made available to subcontractors (except possibly through arrangement with our prime contractor, if they were willing to do so). Similarly, subcontractors may not be able to take advantage of the antitrust protections which have been provided. By the same token, we have not concluded our review to determine whether it is appropriate for each of the provisions in the DPA, and all of the references, to include subcontractors.

Similarly, the definitions section might be the appropriate location for a reference to "form, fit and function" so as to facilitate the use of the title III authority for other than identical items of supply.

4) Section 125 of the bill. This section revises the existing antitrust protections of the Defense Production Act. In that regard, we believe that enhancing the antitrust protection for certain sanctioned industry consortia is an important, and commendable effort. If properly drafted, we also believe that having this "stand-by" authority on the shelf should obviate the need, and the time, for Congress to consider specific legislation each time a situation arises

for work in a critical national defense area. For example, Congress did create specific antitrust protection for SEMATECH and is considering it for HDTV. Antitrust experts are reviewing the bill's language for us.

While we generally support its inclusion, we would call your attention to the fact that there are differences when dealing with providing protection for marketing an existing product (as in the Export Trading Company antitrust provisions from which this language was derived) and in the protection of the creative processes of technology development that this bill seeks to promote. In our view, the desired result of the antitrust protection under this bill is to create a new process or product--and from which other potential competitors (who are not members of the consortium) will be frozen out. By its very nature, those who engage in that research may not be able to meet the criteria set forth on page 30, lines 1 through 9. The Committee needs to give this area some greater thought and attention.

5) Section 127 of the bill. This section makes a change to the standard of review for the President under the Exon-Florio provisions of the Trade Act. In our view, it is too early to determine whether the standard of review needs to be changed. As you know, the Treasury Department has not even issued final rules under Exon-Florio. There have been a number of reviews already made, and it does not appear that the current standard has presented the Council on Foreign Investment in the U.S. with any barrier to review. We believe that there should be final rules under the prior law, and more time and experience gained under those regulations, before a change to the standard of review appears warranted.

6) TITLE II-ADDITIONAL PROVISIONS TO IMPROVE INDUSTRIAL PREPAREDNESS. As a general note, the initiatives in Title II of S. 1379 are designed to make the acquisition system more responsive to the unique governmental requirements of the defense industrial base. We support those statements. We believe it is imperative that the benefits which these provisions establish flow directly to the entity doing the investing.

As PIA has already noted, for many subcontractors, it is the general federal acquisition system, not any specific attention or barrier to participation, that forces companies out or acts as a barrier to their further participation. Fundamental reform of the acquisition law and regulations will have a greater impact on firms' participation in federal procurement generally, and with the defense industrial base in particular, than almost any other initiative that is adopted. In effect, we believe that the initiatives which the Congressional Armed Services

Committees started with last year, and continued this year in terms of commercial products purchases, and commercial-style procurement practices, could have positive, long-term benefits. Some of the additional amendments proposed in this Title II will also fit that category.

7) Section 214 of the bill. This section requires an acquisition policy to permit the procurement of any critical item of supply on a non-competitive basis in order to maintain at least one domestic source determined essential to the national security. Specific guidance is also provided for subcontracting.

We compliment Senators Dixon and Heinz for focusing their attention on this critical segment of the defense industrial base. We all recognize the role of subcontractors in the industrial base; but as PIA noted earlier, participation will not be further enhanced by mandatory domestic sourcing as much as it will be through the incentives to participate. Section 214 is not targeted to a critical industrial resource or technology. We are reluctant to support domestic sourcing indiscriminately. It is unnecessary and potentially expensive.

8) Section 302 of the bill. Under the legislation, authority is provided to stockpile not only critical commodities, but also materials and components in sufficient quantities to meet the defense mobilization needs. Here again, in our view, the intent is well-meaning. There is no reason why the nation's stockpiles should be restricted to the basic raw materials of manufacturing for which we are foreign dependent. But the expansion of the authority to include components and other subassemblies must bring with it some caution. The stockpile managers must be very selective in the components that are included. The General Accounting Office has investigated, and several committees of the Congress have held hearings on, items which the government has purchased and stored, only to find out later that the configuration changed, or the system is out of production. The difficulties in meeting the logistics needs of the Government might be increased if this authority is not managed properly.

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Senator DIXON. Thank you very much, Mr. Gross.

Mr. Moore, let me ask you this. Would you be supportive of extending the reach of the Defense Production Act to permit projects directed at improving processes to increase production efficiency?

Mr. MOORE. Senator, certainly. That seems very appropriate.

Speaking for our industry, we deal with processes as much as we do products. If you look at anything in this room except the people in it—and that includes the materials made in their clothing—everything is either made by a machine tool or made because the machine tool helped build the machinery that made that product. Included in that is the different processes that go into making those particular products.

So I think that including process improvement is very appropriate.

Senator DIXON. Thank you very much.

Mr. Amacker, the distinguished chairman of this committee asked me to ask you a question before he left, Senator Riegle. He says:

EXON-FLORIO PROVISIONS

Mr. Amacker, you state on page 9 of your testimony that the American Electronics Association has concerns about foreign acquisitions of U.S. defense companies but your association has not yet taken a position on whether the Exon-Florio provisions of the DPA should be strengthened.

Can you describe for this committee what your association's concerns are and how you believe this committee should deal with them?

Mr. AMACKER. Yes, sir.

To separate the AEA position from the company position on page 9, I also made a disclaimer in there that some of the things are my opinions as compared to being the AEA's position as the thing is read into the record.

As of this time, the Board of Directors of the AEA has not taken a direct position on the Florio provisions. It is a matter of—even though the inclination is to be very sympathetic in terms of the officers of the association, it requires the board approval, and so that is why there has been nothing forthcoming as of this time.

Senator DIXON. Is there a possibility that in the next several months something of that kind would occur? We will be marking up this.

Mr. AMACKER. Yes, sir.

Senator DIXON. And, incidentally, I want you all to know this, particularly this panel, which probably has a direct interest in it, as distinguished from the more generic interest of the previous panel. We expect to mark up in the very early spring on this, and so if you have an official position of your association that could be transmitted to Chairman Riegle or this member it would be valuable to us.

Mr. AMACKER. Yes, sir. We certainly will be acting on that shortly, and I believe you will be favorably pleased with the outcome.

Senator DIXON. I thank you, Mr. Amacker.

Mr. Gross, in PIA's comments on title II of S. 1379 you mention benefit flowing to the investing entity, and I would like for you, if you would, to elaborate on that a little.

Mr. GROSS. Well, as we read the proposed law, there are incentives to the prime contractor—it says "contractor"—for rewards for investments and cost reductions, and there is nothing in that—if those cost reductions come from the subcontractor, which they often do, as we read it right now, there isn't anything that necessarily flows that down to where the real savings and investments come from.

Senator DIXON. In section 111, you suggest that alternate sources of critical industrial resources and critical technologies need not be source of identical resources or technologies, but isn't that the whole purpose of expanding production?

Mr. GROSS. Well, yes, it is, but there—like in so many other issues in this defense industrial base, there are actually conflicting needs, and I go back to the CSIS three goals, which I think are very, very good. The need for peacetime efficiency I think conflicts to some extent with the need for wartime surge capability. Wartime surge capability is very expensive.

Senator DIXON. Believe it or not, I agree with that.

Mr. GROSS. And if you add that expense in peacetime, you probably can't afford it. But even more important to innovative subcontractors, the need to have technological superiority I think can conflict with both of those other goals, and particularly the innovative subcontractor, which Leach is certainly one, too. When we are investing in our technology for defense purposes and it is proprietary and in the guise of— really we sometimes think—of expanding the industrial base, DOD says you have got to give that technology away— and I mean literally give it away to a competitor—then it is no longer worthwhile for us to invest in the defense industrial area.

So there is the technology leadership goal competing with the peacetime efficency and the surge capacity goal, and it is a balancing act, and it requires judgment, and I liked Bob Costello's comment that we have got to—move out of the no-risk environment. We must be willing to make the decisions that are risky decisions, that, include balancing off this industrial base goal against that goal. We want it nice and clean and easy where we only make the easy no trade off decisions and this will not achieve our objectives.

Senator DIXON. As you know, in my past experiences with a number of other pieces of legislation that you are obviously familiar with I have been very active in trying to protect the proprietary interests of business concerns in the country. I remember spending an entire Saturday with business leaders in my State on a pretty day when golf would have been a better alternative discussing proprietary interests. I hope some in this room remember we protected them, I think, pretty well in other legislation I have cosponsored in the past or in which I have been a principal sponsor, and I agree entirely with the thrust of those remarks by all three of you.

I regret to tell you I have a commitment at noon with the majority leader and some others on matters of great importance concerning concluding reconciliation and some other things by Monday, which prevents me from pursuing this at greater length.

Incidentally, I understand that Chairman Riegle and Senator Heinz have statements to be in the record. We will ask that they be reproduced in the record as well.

[The complete prepared statements of Senators Riegle and Heinz follow:]

PREPARED STATEMENT OF SENATOR RIEGLE

In July of this year the Banking Committee began a series of hearings on whether the American economy is in decline in relation to its main economic competitors, and if so what the implications of this are for our national defense and political position in the world. Senator Dixon has for some time been concerned about these same issues and in particular the decline of our defense industral base.

On July 24th, Senators Dixon, Heinz, Shelby, Wirth and D'Amato introduced S. 1379 a bill designed to strengthen our defense industrial base by amending the Defense Production Act. Today's hearing and another hearing scheduled for next Tuesday will focus on that particular bill.

I want to commend Senator Dixon and the other authors of this bill for their work. The issue of how to reverse our relative industrial decline is of the greatest importance. I assure you this Committee will make that a priority issue during my chairmanship.

PREPARED STATEMENT OF SENATOR HEINZ

This is the third hearing on our defense industrial base and proposed changes in the Defense Production Act, and it comes at a most appropriate time—precisely when our manufacturing base is facing its greatest attack. Ironically the threat in this case comes from our own Administration.

There have been some significant developments in the last few weeks within the Administration that are not only deeply disturbing but profoundly dangerous to our future as a world leader. I refer to what appear to be systematic efforts to destroy anything the government is doing on behalf of critical technologies.

For example, the Defense Department until yesterday when we caught them was apparently in the process of shutting down new DARPA funding for research into high definition systems and displays and was investigating how to cancel awards that have already been announced. Other DARPA funding may also be jeopardized as well. This effort to root out the last vestiges of government support for HDTV goes hand in hand with the apparently successful effort by the Office of Management and Budget and the Council of Economic Advisors to block any effort by the Commerce Depart-

ment to develop a strategy for this industry or even to acknowledge that it is important.

Not entirely coincidentally, the Defense Department has also decided to terminate the Defense Manufacturing Board by next spring. The Board has several advisory groups examining how the U.S. can establish efforts in high definition system that are critical for military control and command functions.

I also understand that funding for Commerce's Technology Assessent program will be reduced, and that further government support for Sematech is jeopardized as well.

For some reason, Mr. President, this Administration seems so terrified of what we have come to call "the IP word"—industrial policy—that they are perfectly prepared to sell out America's technological future in favor of a misguided view of how the world trading system operates.

Every schoolchild knows that the eagle is our national symbol, representing a spirt of alert engagement in the world. There are apparently those in the Administration who would take their spirit from a bird of a different feather—the ostrich—and bury their heads in the sands rather than face danger.

Mr. Chairman, we all know it's going to take a lot more than amending the Defense Production Act to turn this situation around, but today's hearing provides a timely opportunity to discuss it and to develop a Congressional consensus on how to move forward.

Senator DIXON. We will keep the record open until December for further information that will be accumulated.

We thank you all very much for attending today.

Mr. AMACKER. Thank you, Senator.

Senator DIXON. This meeting is adjourned.

[Whereupon, at 11:52 a.m., the committee was adjourned.]

[Response to written questions and additional material supplied for the record follow:]

Before the
Committee on Banking, Housing and Urban Affairs
U.S. Senate

STATEMENT OF

COMMITTEE OF AMERICAN AMMUNITION MANUFACTURERS

Mr. Chairman and Members of the Committee, the Committee of American Ammunition Manufacturers ("CAAM") is an ad hoc committee of U.S. ammunition companies whose purpose is to promote national defense and a viable defense industrial base. See Attachment 1 for a list of CAAM members.

At the outset, CAAM wishes to express its support for S. 1379, the Defense Production Act Amendments of 1989. We are particularly pleased that it includes sections concerning procurement of critical items of supply, unfairly priced offers from non-domestic sources, unfair trade practices, critical technologies, the integration of national security and economic policies, and the assessment of industrial responsiveness capabilities. We would also like to commend the sponsor of this legislation, Senator Alan J. Dixon (D-IL), who has been in the forefront of important defense issues, particularly those affecting the defense industrial base.

As producers of conventional munitions, CAAM has been concerned about the deteriorating defense industrial base. According to former Secretary of Defense Frank Carlucci, "[t]he industrial base is an integral part of our national security: a strong base is, therefore, an important deterrent to conflict." However, recent studies have revealed serious erosion in the base. In his annual report to Congress for fiscal year 1988 then-Secretary of Defense Casper Weinberger warned that continued erosion of the industrial base could "rob the United States of technical expertise necessary for long-term economic survival" and "could alternately lead to a 'hollow defense' if vigorous action is not taken now."

More recently, reports prepared by Costello and the Center for Strategic & International Studies ("CSIS") have highlighted some of the serious problems confronting the defense industrial base. The Costello report pointed out that the United States is no longer "self-sufficient in all essential materials or industries required to maintain a strong national defense." It recommended that new strategies be developed to meet national security requirements and that incentives be established to ensure domestic manufacturing capabilities for certain defense products. However, the biggest obstacle to rebuilding the industrial base is complexity of the problem. There is simply no simple solution. The enormity of the defense industry, compounded by cumbersome contracting regulations and a declining defense budget, make it difficult to develop effective remedial action.

The munitions industry is deeply affected by problems in the industrial base, particularly excessive regulations and the declining defense budget. The CSIS report describes how the military specifications for certain ammunition products are so rigid and antiquated that they substantially increase the cost and the amount of time it takes to produce a product. In addition, CAAM believes the military's reliance on "competition for competition's sake" misconstrues the Competition in Contracting Act and allows price to dominate contract awards at the expense of other equally important factors, such as quality and reliability, to the detrement of defense industries and the Defense Department. Reduced defense spending also has a significant adverse effect on ammunition -- a critical item which requires long lead-times for production. A recent analysis of industrial mobilization responsiveness by the U.S. Army graphically illustrates this problem. Of 137 "war stopper" ammunition items, 92 would meet planning requirements within one year, 14 would take two years, and 31 -- almost 25 percent -- could not even meet such requirements within three years.

The length of the production process means that the adequacy of war reserves becomes a critical issue. On the sixth day of the Yom Kippur War in 1973,

Israeli armed forces were almost out of ammunition and needed an 11th-hour airlift by the United States to ensure their survival. As General Richard H. Thompson testified in 1987, the Middle East conflict "graphically showed how fast materiel can be consumed in intense conflict -- the very type of conflict which represents the greatest danger to our national survival." It also "taught us that we could not quickly replace the materiel we provided Israel." Unfortunately, stockpiles of these critical items have been inadequte to ensure our national defense. In Vietnam, there was a "dramatic drawdown" of ammunition reserves because of the "alarming" magnitude by which anticipated consumption rates were exceeded. However, despite this experience, the United States' munitions stockpiles were characterized in 1985 as "in pitifully sad shape compared to where they ought to be." The Army would appear to readily concur. In evaluating the level of war reserves, the stockpile of preferred munitions was only 65 percent of needed levels last year. By FY 1991, the Army foresees a "significant decrease in ammunition," with the fill level declining to a meager 50 percent of requirements.

Consequently, CAAM actively supports Senator Dixon's efforts to reauthorize the Defense Production Act. Specifically, Title II of the legislation addresses an issue of great importance to CAAM: procurement of critical items of supply. This provison would require the President to establish an acquisition policy which permits a departmental secretary or an agency head to restrict competition for the procurement of critical items of supply to domestic sources. Each procurement would be limited to "the minimum aggregate quantity necessary to sustain at least one domestic source. . . ."

It would apply to subcontract solicitations for major systems or other specified procurements, by requiring that they specify the minimum percentage of the total estimated value of the contract that must be performed by one or more domestic firms. In addition, the solicitations would require a subcontracting plan to indicate how this objective would be achieved. The amount of domestic content would be accorded

not less than 10 percent of the total evaluation points for all source selection factors specified in the solicitation. Additional weight would be given offers which exceed the minimum level of domestic content. Finally, the provision requires the Secretary of Defense to determine what items of supply are critical and to publish a list of such critical items.

CAAM supports the critical items provision because it safeguards our natioinal security by ensuring that the defense industrial base will maintain critical items of supply. Preserving adequate production levels of critical items within the defense industrial base will help keep a warm base for readiness capabilities and surge requirements.

However, while CAAM strongly supports the inclusion of this provision, we note that the current language merely allows, but does not require, restricted procurement. We are therefore concerned that this authority may not be exercised. We suggest that you consider requiring departmental secretaries and agency heads to restrict competition for such contracts to domestic sources unless they determine that such action is not needed to sustain readiness. We believe that this shift in the structure of the provision would be more likely to result in procurement from domestic sources while, at the same time, give the military the flexibility to buy foreign goods when defense readiness is adequate. We have drafted some suggested language for your review. See Attachment 2.

The United States cannot afford to abandon its self-sufficiency in ammunition production. Ammunition manufacturing is a very complicated process requiring sophisticated technology and highly skilled workers in order to meet exacting military specifications. In a crisis, our nation would face severe consequences if conventional ammunition facilities had ceased production and did not have the capability to supply our soldiers. U.S. ammunition manufacturers cannot turn to commercial markets to ensure the orders needed to maintain production and earnings. Defense

companies are therefore dependent upon government policies, including defense requirements and budgets, for their survival. Should the U.S. government permit the ammunition base to deteriorate, the consequences to our national security will be severe.

Significantly, it is not only the private sector that understands the importance of the ammunition production base. In a report to the House Committee on Appropriations in December 1986, the Assistant Secretary of Defense for Acquisition and Logistics emphasized that "[a]mmunition production capability is essential to the deterence, fighting, and winning of a war. As such, preservation of the ammunition production base takes precedence over other political and economic considerations." The 1980 Defense Science Board's Summer Study Task Force on Industrial Responsiveness put the issue more bluntly: "A soldier can survive forever without mail, 30 days without food, 3 days without water, 3 minutes without air, but not a second without ammunition."

In conclusion, CAAM is very supportive of Senator Dixon's proposal to reauthorize the Defense Production Act. CAAM applauds his foresight with regard to the investment needed to sustain the defense industrial base to ensure manufacturing ability and technology growth that keeps pace with U.S. military requirements.

ATTACHMENT 1

COMMITTEE OF AMERICAN AMMUNITION MANUFACTURERS

Armtec Defense Products Company

Bulova Systems & Instruments Corporation

Chamberlain Manufacturing Corporation

Hercules Aerospace Ordnance Group
Hercules, Inc.

Intercontinental Manufacturing Company

Kaiser Aluminum and Chemical Corporation

NI Industries, Inc.

Nuclear Metals, Inc.

Olin Corporation

ATTACHMENT 2

PROCUREMENT OF CRITICAL ITEMS

SEC. 1. PROCUREMENT OF CRITICAL ITEMS OF SUPPLY.

(a) IN GENERAL. — Chapter 137 of title 10, United States Code, is amended by adding at the end the following new section:

"S 2330. Procurement of critical items of supply

"(a) REGISTRY OF MOBILIZATION PRODUCTION BASE SUPPLIERS. — The Secretary of Defense shall establish and maintain a registry of mobilization production base suppliers for all critical items of supply essential to maintain adequate defense readiness.

"(b) RESTRICTED COMPETITION. — (1) Except as provided in paragraph (2), the head of an agency shall restrict to mobilization production base suppliers the competition for all or a portion of a contract opportunity to fulfill such agency's requirements for the procurement of critical items of supply.

"(2) The limitation in paragraph (1) shall not apply if the head of the agency concerned, with the concurrence of the Secretary of the Army, determines, in writing, that restriction of competition to mobilization production base suppliers is not reasonably necessary to sustain adequate defense readiness, and sets forth the reasons for said determination.".

(b) EFFECTIVE DATE. — The amendment made by subsection (a) shall become effective upon enactment.

(c) CLERICAL AMENDMENT. — The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

"2330. Procurement of critical items of supply.".

Testimony on Behalf

of the

Bethlehem Steel Corporation

to the

Committee on Banking, Finance and Urban Affairs

U.S. Senate

November 17, 1989

by

Roger P. Penny

Senior Vice President, Operations

On behalf of Bethlehem Steel Corporation, I am pleased to have the opportunity to submit this statement to the Senate Banking, Housing and Urban Affairs Committee in support of S. 1379, a bill to reauthorize and amend the Defense Production Act of 1950. Title III of the Defense Production Act encourages investment by the private sector in facilities needed for national defense with minimal cost and minimal risk to the Federal Government. The incentives for private sector investment in the defense industrial base are through product purchase guarantees.

A DPA Title III project of particular interest to domestic steel plate producers involves the production of accelerated cooled and direct quenched (AC/DQ) steels, a project that will have positive effects on domestic plate production capabilities. The resulting technical benefits will be improved mechanical properties of steel plate, reduced dependency on strategic alloying materials (particularly chromium), and reduced processing requirements for manufacture of plate and the products made from plate. Domestic AC/DQ capabilities will, therefore, reduce the costs that the Department of Defense would incur for ships, tanks, and other products made primarily from steel plate. Additionally, AC/DQ capabilities will improve the international competitiveness of the domestic steel industry in non-defense, commercial markets as the technology will be advantageous for the production of some plate grades for civilian applications.

As our nation's leading plate producer, we have for years been studying the potential for AC/DQ technology. Our own analyses, and those of every other study with which we are familiar, point to the same conclusions. Specifically, the civilian commercial market, on its own, is insufficient to support the $15-20 million capital investment required to install AC/DQ facilities at a domestic plate mill. A decision to invest in these facilities must be largely justified by anticipated steel plate orders for defense applications. However, uncertainties associated with defense procurement decisions because of political, budgetary, and other factors create financial risks that Bethlehem Steel Corporation and, we believe, every other domestic plate producer, will be unwilling to absorb. Thus, risk-reducing incentives, such as the product purchase guarantees envisioned in the DPA Title III Program, are required for the capital investment. The guarantees are justifiable as a large portion of the anticipated production would be for defense purposes.

We support the establishment of the Defense Production Act Fund described in the S. 1379 bill. We believe that the revolving fund mechanism will be an effective vehicle to provide the purchase guarantees required for DPA Title III projects. Although it may prove unnecessary to draw upon these monies for the direct purchase of steel plates by the Defense Department, the DPA Fund, with an adequate balance and duration, can provide the assurances needed to justify the capital investment needed for modernization of our defense industrial base.

National Tooling & Machining Association

STATEMENT SUBMITTED BY

MATTHEW B. COFFEY

PRESIDENT

NATIONAL TOOLING & MACHINING ASSOCIATION

BEFORE THE

COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS

UNITED STATES SENATE

NOVEMBER 17, 1989

9300 Livingston Road • Ft. Washington, Maryland 20744 • (301) 248-6200

Thank you Mr. Chairman for allowing the National Tooling and Machining Association (NTMA) to submit testimony in support of S.1379, the "Defense Product Act Amendments of 1989."

NTMA is a non-profit organization composed of nearly 3,200 contract precision machining, tool, die, mold, diecasting, and special machining companies throughout the United States. The industry supplies the necessary precision tooling and machining for such vital industries as defense, automotive, aerospace, electronics, ordnance, transportation, nuclear and others. The majority of firms in the industry are small, averaging 23 employees and are privately owned and operated. The men and women who make up this industry are skilled crafts-people who custom design equipment used to manufacture, by mass production, thousands of precision parts and components to include parts for planes, ships, weapons systems, and car engines.

NTMA was formed in 1943 when the war mobilization effort rested on the ability of our industry to convert rapidly from commercial to military production. That mobilization, the biggest in the history of the world, could not have occurred without the machinists, tool and die makers and mold makers who made the bulk of the parts and components for everything from rifles to every major system in the air or on the land or sea. The draft exemptions granted workers in our industry by the Selective Service reflected their importance and the

recognition that a four or five year apprenticeship is necessary to replace any industry worker.

With this as a background, it is not difficult to understand our strong support for S.1379, the "Defense Production Act Amendments of 1989," introduced by Senator Alan Dixon and cosponsored by Senators Heinz, Shelby, Wirth, and D'Amato. We believe the concept behind S.1379 is unassailable. S.1379 is based on the premise that the U.S. Defense Industrial Base must be capable of providing necessary manufactured components and equipment for the defense of our country during a war.

NTMA supports the enhanced antitrust protections for sanctioned industry consortia; and is encouraged by the interest shown in offsets and applauds the Act's stabilizing provisions and expansion of the Defense Production Act Fund.

CHANGES AND CHALLENGES

Our industry is in the process of massive changes, which challenge the innovativeness, management skills, and financial resources of NTMA's membership. Our members must rise to the challenge to change process technologies, which have undergone rapid conversion from old-line mechanical controls to computer-driven lasers. They are challenged to upgrade their work force to fit with the new capital and technologies. They are challenged to adapt to the demands of their customers as they are undergoing rapid technological change and a

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restructuring in the way they do business - new processes, new materials, finer tolerances and specifications, and new business locations.

Now we find ourselves facing another truly significant challenge: international competition. We are seeing the competitive environment around the world change rapidly and substantially because of three major factors:

-- The movement offshore of major U.S. manufacturing facilities with the corresponding purchase offshore of supporting tools, dies and molds;

-- The development of increasingly high-level technical expertise and skills by foreign firms (largely as a result of past U.S. policies to strengthen these foreign economies); and,

-- The favorable economics of foreign firms based on such factors as government subsidies, lower cost of capital, lower employee benefit costs and fewer mandated costs imposed by government regulation.

THE INDUSTRIAL BASE

While our members subscribe to free and open competition, these factors have placed unrealistic capital burdens on small owner-operated businesses.

While these factors effect domestic economics, the balance of trade which includes technology, has not been favorable to the U.S. and we feel these factors have combined to cause an erosion of the U.S. industrial base. We believe further that our nation needs to "wake-up" and realize that we can no longer "gear up" rapidly to meet emergencies as we did in World War II, and that we can no longer afford the financial burden of mobilization as we have in the past. In addition, we must realize that we are now, in some areas, technologically dependent on other nations to provide parts and components to keep some of our major weapons systems operable.

Last June the retiring Army Chief of Staff noted that munitions, spare parts, and systems would last only three months in a war scenario, and that it would take nine months for defense production to catch up.

DEFENSE PRODUCTION ACT FUND

As far back as 1980 the report of the House Armed Services Defense Industrial Base Panel noted that the small contractor and subcontractor base was the weakest link in the industrial base. At the same time, the withdrawal of European short and intermediate range nuclear missiles and ongoing nuclear reduction negotiations make the conventional defense industrial base all the more important to our national security.

Recent history shows that cuts in the defense budget are invariably felt most severely in the area of readiness. Major systems will continue in development, while existing systems will lack the spare parts with which to function. The small firms, which are nimble and can respond more quickly in times of national emergency, will wither. The larger and less nimble prime contractors, who are becoming even more dependent on small suppliers, will survive.

If there is a national emergency, there may not be enough of the former to support a mobilization. In the private sector these small firms have already suffered along with their U.S. customers in the automotive, computer, electronics, appliance and other import-impacted sectors.

We believe that the provisions in S.1379 relative to the Defense Production Act Fund are sound and represent a significant step forward in providing for the enhancement of the modernization effort required by our industry in order to maintain its competitiveness with not only international competition, but to keep pace with the technology required to keep the industrial base current and self-reliant. The principles of the Fund replenishment is fiscally responsible and we would hope that government funds derived from sales would include those real properties which have been declared excess. Fund availability should be aimed at keeping the industrial base broad and not merely concentrated on any particular core group.

We believe that the U.S. Defense Industrial Base must be capable of providing necessary manufactured goods for the defense of our country during a war. We support legislation which would require the President, to the maximum extent practicable, to limit sourcing to U.S. providers of parts and components, unless the President determines that domestic firms cannot meet anticipated surge production needs for at least six months.

The Pentagon should take a look at the U.S industrial base before making procurement decisions. We believe the evidence of past neglect in that regard is so evident that there can be no reasonable argument against such a mandate.

STRENGTHENING ANTITRUST PROTECTIONS

S.1379 amends section 125 to provide antitrust protections for sanctioned industry consortia. This amendment would allow firms to pool resources to purchase raw materials, collect and share information on production costs, marketing, manufacturing and distribution capacities for purposes of jointly manufacturing products thereby preserving America's competitiveness and encouraging entrance into export markets. At present, small U.S. manufacturing firms are at a severe competitive disadvantage because they are not allowed to join together domestically in consortiums, except under the imperfect form of an export trading company (which we have

formed for our membership). Section 125 of S.1379 as written would allow U.S. firms to obtain certificates of exemption from U.S. antitrust laws. While this provision is a step in the right direction, NTMA proposes an amendment to Section 125 of S.1379. NTMA proposes that this section be amended to include a simplified process for small business, i.e. a notification process so that small companies may more readily participate in the sanctioned industry consortia which will permit firms to pool resources and receive antitrust protections authorized under the bill.

Currently, Section 125 proposes a certification process for all companies who wish to join in a consortia in order to receive the limited antitrust protections specified. Applicants would need to go through a lengthy, and likely costly, process before receiving a certificate from the Attorney General and the Chairman of the Federal Trade Commission (FTC), including a 90-day notice in the Federal Register.

Small companies such as the tooling and machining shops which comprise the membership of NTMA, operate on a contract-to-contract basis with short production runs and quick turn-around times. Ours is a customized service industry and a rapid response to a buyer is essential, with submission of quotes normally expected within 30 days, i.e. competition is highly sensitive. Cashflow for a small company fluctuates on a daily basis and there is limited excess capital. The present certification process could require substantial time and

resources, and probably the retention of special counsel. Consequently, the certification process is a real deterrent to participation by many small businesses.

A notification process for small companies whose aggregate number of employees is 500 or less (the SBA small business size standard applicable to most types of manufacturing, including metal fabrication), would more readily permit small businesses to benefit from antitrust protection should they wish to join together, usually in a one-time grouping to target a single opportunity or to meet a specific one-time need. It is envisioned that small businesses would provide notification to the Department of Justice and the FTC of their intent to enter into a sanctioned industry consortia and the consortia would be authorized to proceed unless notified to the contrary within 10 working days.

These types of joint ventures are used extensively by our major trading partners such as West Germany, Japan, Sweden and Italy. This concept is of critical importance to small U.S. firms and Senator Dixon should be complimented on his recognition of the trend in the last decade toward downsizing of manufacturing facilities. Small firms in high technology fields are greatly restricted by the high cost of capital in their efforts to set up automated flexible manufacturing systems which this amendment addresses. Acting alone, small companies find it difficult to upgrade their production facilities, but allowed to operate jointly, the U.S. can also reap the benefits of

these alliances. NTMA strongly supports passage of this amendment.

Of further concern to NTMA and its members is the current U.S. offset policy.

OFFSET POLICIES

Many Europeans believe that the post-World War II economic order has changed fundamentally to favor them. They see a world in which economic, and even political power, is being shared on a trilateral basis among the United States, Japan and Europe.

This attitude lies behind the fierce competition from Europe that American small businesses face. It is an attitude that gives rise to massive European subsidies for business and to restrictive, quasi-protectionist policies of Europe including their infamous offset policies.

Europe may expand the request for offset or trade reciprocity required of U.S. companies seeking to sell into the European market. In other words, the large offsets imposed by the European countries for military sales may be imposed on smaller sales, gradually affecting more and more U.S. companies, including members of our own Association.

A brief statement is needed about this issue because offset is a troubling index of the forces we now face as a country for doing business in Europe. Every country in Europe has an offset policy yet America does not have such a policy.

The practice of demanding offset or mandated reciprocity from U.S. companies began with the General Dynamics F-16 sale to a consortium of NATO countries in 1975 and with the Swiss purchase of Northrop's F-5 in the same year. Offset in the first case for the F-16 included mainly a co-production agreement, where a certain percentage of the planes had to be constructed in Europe (the Netherlands) as part of General Dynamic's price for making the sale. Northrop had to commit to export a value of products from Switzerland equivalent to 30% of the $400 million contract. The U.S. companies had little choice but to comply with the European offset request or lose the sale. This type of policy has now spread to certain other sectors outside the area of defense, such as telecommunications, and to countries in Europe such as Spain which had no offset policy before 1980.

Other notable examples of offset include Raytheon's sale of the Patriot missile to West Germany in 1984 and Boeing's sale of the Airborne Warning and Control System (AWACS) to Great Britain and France. (Japan was similarly successful in extracting offset agreements from U.S. companies, such as in the recent FSX case where technology transfer and co-production agreements were necessary in order to win the sale.)

In my view, U.S. companies have tried very hard to meet these offset requests and should be let alone by the U.S. government to make their best offer; having some sale in this country is better than no sale at all.

However, U.S. companies should not be at the complete mercy of foreign governments set on extracting every ounce of economic advantage out of sale, as if the goal of every European country, or Japan, is to be certain that all or most of the product is produced in the purchasing country and all or most of the key technology to make the product is transferred out of the United States as well.

THE EFFECT OF OFFSET ON SMALL BUSINESS

Why is offset a problem for small business in this country? Prime contractors understandably seek help from their sub-contractors in coming up with ways to comply with a European offset request. Sub-contractors have risen to the occasion by transferring technology overseas or by purchasing components from overseas, all in order to help the prime contractor win the sale.

Considerable pressure is often put on the smaller company to transfer technology or to purchase components from overseas. These actions by smaller companies are often in their best interest. However, let me be very clear. The pressure

generated by offset on U.S. companies, whether large or small, to purchase components from foreign countries and to manufacture in foreign factories is definitely not good for the U.S. trade deficit.

Offset puts enormous pressure on the largest U.S. companies to purchase components from overseas and to locate their factories overseas. Some business is definitely taken away from small business in the process. True, some new sales may go to the small U.S. company as sub-contractors, but the pressure of each transaction is all in the opposite direction, to direct the flow of purchasing out of the United States.

We need an American offset policy to harness U.S. purchasing clout!

It is essential for U.S. offset policy to be directed at foreign countries with similar policies already in place (Europe, Japan, Canada and Australia), and now as U.S. companies struggle mightily to win export sales. In this treacherous offset environment, the U.S. companies must always be free to make their best deal.

The above countries have been most effective in applying offset in cases where the purchases are made on a government basis. Even though U.S. government purchases from overseas are relatively small by comparison with Europe, we could consider taking the first step by requiring offset on these purchases.

Despite the Buy American policy, the Pentagon should consider requiring offset of European companies seeking to gain entry to that lucrative market.

A U.S. OFFSET POLICY SHOULD SAY:

1) Yes, we believe in free trade.

2) Rather than applying more trade barriers with additional tariffs and quotas, we believe that large importers into the United States bear a special responsibility to export more from this country.

3) Imports into the United States above certain levels would be allowed only if the importer achieved an established export level. (Many Third World countries now insist that a sale into a country be balanced exactly with an export. European countries appear to say the same thing when their offset percentage rises to 100%.)

NTMA commends your attention to the state of the defense industrial production base. This is a proud group of American crafts-people who have been critical to our industrial might in the past and who look to continuing to play that role for America in the future.

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301

ACQUISITION

July 15, 1988

TO THE SECRETARY OF DEFENSE:

Enclosed are the results of our examination of the problems facing the United States defense manufacturing base. Our objective was to identify the actions necessary to prepare the Department better to deal with the dynamics of manufacturing worldwide. The recommendations we are already putting into action center around six major thrusts: forging the right relations with industry; improving the acquisition system; establishing defense industrial strategic plans that support our military strategic plans; developing manufacturing capabilities concurrent with development of weapon systems; laying the foundation now for the technical skill base required for tomorrow's defense needs; and ensuring that industrial base issues important to our defense benefit from the full spectrum of potential policy remedies, when appropriate.

An underlying message of this project, which is based on extensive advice from industry, academia, and other Government agencies, is that cooperation is an essential foundation to meeting and sustaining defense goals. Our cooperation with industry, with our allies, with other agencies, and with the Congress is imperative if we are to meet ever more sophisticated requirements with relatively fewer resources. Through this project, we are taking the first steps toward such cooperative relationships. Achieving these relationships, however, is requiring a culture change throughout the Department. Our challenge, as you have stated on many occasions, is to maintain serious and consistent efforts toward this goal. I am committed, as I know you are, to make this contribution.

Attention on the defense industrial base has focused on its problems, many of which have been characterized as insurmountable. While we certainly would not claim to have proposed solutions to all these problems, this project has shown, once again, that the nation is willing to assist the Department. We were most fortunate to have the assistance of a talented and dedicated staff, as well as hundreds of individuals, from Nobel laureates and chief executive officers to production line engineers, who generously gave of their time and ideas. The nation's great untapped resources of commitment and ingenuity are our best promise that the security of future generations can be assured.

BOLSTERING DEFENSE INDUSTRIAL COMPETITIVENESS

PRESERVING OUR HERITAGE
THE INDUSTRIAL BASE
SECURING OUR FUTURE

Report to the Secretary of Defense
by the
Under Secretary of Defense
(Acquisition)

July 1988

TABLE OF CONTENTS

FOREWORD iii

SUMMARY v

I. OVERVIEW 1

II. THE COMPETITIVENESS DEBATE 5
- A. United States Competitiveness 5
- B. Opposing Views – Smart People Disagree 7
- C. Areas of Agreement 9
- D. Summary and Conclusions 11

III. NATIONAL POLICY ISSUES 13
- A. Manufacturing Management Issues 14
- B. Government Policies and Practices 15
- C. Educational and Cultural Issues 19

IV. DEFENSE POLICY ISSUES 25
- A. The Department of Defense Mission 26
- B. Security Concerns 28
- C. Department of Defense Concerns 29
- D. Underlying Causes of Competitiveness Problems in the Defense Industrial Base 32

V. BOLSTERING INDUSTRIAL COMPETITIVENESS 39
- Conclusions and Recommendations 39
  - Forging the Right Relations with Industry 40
  - Strategic Planning Task Force 42
  - Production Base Advocate 44
  - Analytic Capability to Develop Defense Perspectives 46
  - Foreign Dependencies 47
  - Factory Modernization Investments 48
  - Program Stability 50
  - Life Cycle Costs 51
  - Quality Control 52
  - Commercial Specifications and Processes 53
  - Emphasis on Process Technology 54
  - Technological Skill Base 55
  - Incentives for Technical Education 56
  - Educational Facilities 57
  - Production Base Impact Assessment 58
  - Coherent Tax Policies 59
  - Coherent Trade and Domestic Policies 60
  - Education and Training 61
  - Private Sector Issues 62

POST SCRIPT 63

FOREWORD

By Dr. Robert B. Costello
Under Secretary of Defense (Acquisition)

A competitive industrial base is key to deterring aggression and, should that fail, to winning wars. The direct role of our industrial base in waging war successfully has been demonstrated during all major conflicts. Thus, the real thrust of this report is to define Department of Defense options to ensure a strong industrial base that will enable us to react appropriately and successfully to any threat.

The North American industrial base provides the weapon systems (from rifles to aircraft and ships) and the major components (for example, radars and engines) needed by our armed forces. It also provides the important logistics support (including food, fuel, spare parts, clothing, ammunition, medical supplies, etc.) required in wartime or peacetime to sustain operations. Our ability as a nation and a continent to supply this materiel to our armed forces is critical and is the reason why it was necessary to frame the action plan that is the central theme of this report.

Defining the breadth of our industrial base is complicated; we rely on a global market that produces both civilian goods and military materiel. Additionally, our industrial base represents not only the capacity and capability to produce goods at an appropriate rate, but the technology upon which these goods are predicated. Add to this economic and efficiency considerations and it becomes apparent that our industrial base is a highly interdependent and extremely complex structure.

As a customer of the industrial base, the Department's peacetime requirements generally are a small fraction of an industry's capacity. Concomitantly, combat requirements are significantly larger and must be satisfied. By itself, the Department of Defense is incapable of sustaining the industrial base upon which it depends. American industry must, of its own volition, remain commercially competitive in today's world economy. The Department, however, can participate in or lead activities that bolster American industrial competitiveness in world markets while ensuring industry's ability to assume a direct role in supporting our combat requirements.

The Department of Defense initiated this effort in June 1987. During this period, the Department obtained information on bolstering industrial competitiveness from more

than 300 Government policymakers, industry leaders, academicians, and representatives of professional societies and industry associations.

Our study, which addresses old issues from a new perspective, was designed to reach a broad consensus on Department of Defense actions that would make a difference in supporting combat operations. We did not attempt to identify industries in need of Government assistance nor to prescribe formulae for their resurrection. Nor did we elaborate any cookbook solutions; but rather we attempted to demonstrate that there is a role for the Department of Defense, and there are processes for defining, by industrial segment, what might be done.

The project itself is an example of the Department's efforts to forge the right relations with industry and to explore how we can bolster industrial competitiveness to benefit the Department of Defense and to ensure America's pre–eminence in tomorrow's world economy.

REPORT TO THE SECRETARY OF DEFENSE

CHAPTER I
OVERVIEW

There is a growing perception among American citizens that America's industrial base is on a downhill course to second–class status. Despite general economic prosperity, there is concern over America's ability to compete in the international marketplace. The Department of Defense also is becoming increasingly concerned. Many basic industries of importance to defense production have declined, threatening the responsiveness of our industrial base. Left unchecked, such erosion could rob the United States of industrial capabilities critical to national security. An efficient, responsive, and technically innovative industrial base is necessary to develop and produce high–quality, affordable defense systems and to maintain our ability to deter aggression or defeat potential adversaries.

In early 1987, the Department of Defense Strategy for Bolstering Defense Industrial Competitiveness was launched. This report represents the culmination of the first phase of that effort.

This report is not based upon an examination of the universe of American manufacturing industries, and does not attempt to make the case that all American manufacturing industries are in decline. In fact, for many years manufacturing has remained fairly constant as a percentage of the United States gross national product, indicating, generally, that the American manufacturing base remains healthy and productive.

Major sectors of American industry are vital and highly competitive in both domestic and international markets. Within other sectors that have not yet been subjected to intense import pressures, there are many firms that continue to compete in the domestic market and some that are effective competitors in international markets. Even in industries subjected to intense competition from foreign firms, some American firms have been or recently have become fiercely competitive.

There are, nevertheless, serious indications of decline in sectors of the industrial base that are fundamentally important to national security and to continued American leadership in advanced technologies. From one sector to another, the indications are somewhat irregular, but, from the defense perspective, the issue is too important to ignore and too vital to presume there is no problem.

Particularly devastating in the long-term is the loss of key production technologies and equipment. In some vitally important technologies, such as machine tools and electronics manufacturing equipment, the erosion has been particularly severe. These are but the leading edge of scores of technologies in which other nations are developing the most advanced manufacturing technologies for the most advanced products. Such loss of supremacy in manufacturing technologies is a particularly insidious threat to American technological and manufacturing leadership.

One consequence is that the Department of Defense is becoming increasingly dependent on foreign-sourced hardware and technology in the acquisition of the technologically superior weapon systems that are fundamental to our strategy of offsetting numerical inferiority with technological superiority. We cannot reasonably expect to offset potential adversaries' numerical superiority with only technological equivalence.

We do not know how these developments ultimately will affect our security. We do know that they give cause for concern. Our capacity to build or replace critical force structure independently of economic and political decisions of other sovereign powers is essential to our security. The Department of Defense must ensure that its actions and policies, as well as the actions and policies of other Government institutions, do not weaken our manufacturing sector and thereby degrade the United States' security posture.

As we look to the future, two fundamental problems threaten Department of Defense capabilities to maintain a modern inventory of technologically and qualitatively superior military equipment. The first is the environment in which the Department of Defense and industry conduct business. The high and rising costs of our major weapon systems appear driven by an acquisition system that encourages long acquisition cycles, high development and production costs, and sometimes obsolete technology. This increasingly burdensome environment is a cause of continuing difficulties in the Department's efforts to fulfill its responsibilities to the nation for effective, efficient procurement of major systems.

The first problem is exacerbated by the second — aspects of fiscal and monetary policy and the costs imposed on industry by some necessary but nevertheless expensive domestic policies. Department of Defense-related causes of problems associated with the declining competitiveness of American manufacturing industries are not the only causes of problems within the defense sector. The underlying causes of national competitiveness

problems also apply in every respect to firms within the defense industrial base. However, defense-related problems cannot be solved if the broader national-level problems are not resolved. Industry clearly is appealing for the Congress and the Executive Branch to understand and appreciate better the total impact of Government actions and to provide improved coordination and consistency of national policy.

Many congressional and executive intrusions into the market have negative impacts on the competitiveness of American manufacturing industries. The tax code, antitrust laws, and Department of Defense acquisition policies frequently discourage investment in domestic production facilities and innovation by domestic producers. Some elements of United States law more appropriate when America was a more self-contained economy now are harmful to American industry in the international market. Actions to adjust these laws to the conditions of a more international marketplace have been slow and inadequate.

The Department of Defense can contribute to solutions, but cannot unilaterally provide them. Effective solutions will require the cooperative efforts of the Congress, Executive Branch departments and agencies, and the public. We hope that this report will stimulate the beginning of that cooperative effort.

The following chapters: explain more fully the reasons for Department of Defense concerns about United States industrial vitality; discuss the nature and scope of our competitiveness problems and the Department's role in addressing them; explore the causes of and potential solutions to underlying long-term problems; and, finally, offer recommendations for action.

CHAPTER II
THE COMPETITIVENESS DEBATE

A decade of debate about *industrial policy*, as well as today's concern with *competitiveness*, are reflections of major structural shifts in our economy. The many indicators of these changes include the declining role of the goods producing sector and the rising importance of foreign trade and the increasing integration of world capital markets.

This section begins with a brief review of the debate between public policy specialists we surveyed who warn of a broad competitive decline and those who believe that America's industrial performance has been relatively good. These two groups are far apart on their interpretation of *the facts* and correspondingly far apart on their recommendations for action. There are, however, some areas of agreement between them and considerable agreement about the role and responsibilities of the Department of Defense. Framing Department of Defense actions in the context of these larger economic and industrial issues allows the segregation of the Department's policies and responsibilities from those of other agencies and highlights broad areas of policy interplay associated with Department of Defense concerns.

A. UNITED STATES COMPETITIVENESS

The gauge by which analysts have measured United States competitiveness is itself a matter of intense debate. The President's Commission on Industrial Competitiveness and other recent studies have settled on the following definition: *competitiveness for a nation is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining and expanding the real incomes of its citizens*. According to these studies, statistics on real wages, the trade balance, productivity growth, innovation, and human resources present a bleak picture of America's competitive status. These studies generally contend that these competitive weaknesses are deep–seated, structural, and not quickly remedied. Similarly, they forecast dire consequences if they are not reversed.

Sectoral Decline

In addition to the macro–economic indicators discussed above, some analysts have been concerned with competitive decline at the sectoral level. In particular, they are concerned with the decline of *strategic* sectors.

There are two senses of the term *strategic industry*: strategic for economic growth, and strategic for security. The Department of Defense concerns are most obvious with respect to the key defense–related industries that largely determine both the quality of our instruments of deterrence and the scope of an American response to aggression should deterrence fail. However, strategic industries, in the economic sense of the term, also are of concern.

These economically strategic industries are, by and large, research–intensive industries or industries that exhibit important technological spillovers or *linkages* from one industry to another. Perhaps the best example of such an industry is the semiconductor industry. Semiconductors have been responsible for technical revolutions in supercomputers, home appliances, automobiles, telecommunications, energy, and many other products. The telecommunications industry may be another *strategic* industry, with the potential to stimulate broad cost reductions in communications, decision making, and control technologies. The low–cost availability of energy also provides a strategic *leg–up* to American firms in their ability to be cost competitive.[1] Other *strategic* industries might include computers, office equipment, construction and mining machinery, instruments, and many types of manufacturing equipment, based on their tendency to *export* technology to other industries. Each of these industries has important *linkages* to other industries. They are believed to be essential to long–term economic growth and competitiveness.[2]

The United States historically has been a world leader in the exploration and development of such strategic technologies. Some observers are concerned that even in such technologies, American performance has begun to slide.[3]

[1]See Peter T. Jones and David J. Teece, "Research Agenda on Competitiveness," Berkeley Business School, Berkeley, CA, 1987, pp. 45–51.

[2]F.M. Scherer, ***Innovation and Growth***, MIT Press, 1984, esp. Chapter 3, "Interindustry Technology Flows in the United States," pp. 32–58.

[3]W. Finan, *et al*, "The U.S. Trade Position in High Technology: 1980–1986," Joint Economic Committee, U.S. Congress, Washington, D.C., 1986.

It is alleged that the Japanese, in particular, understand the importance of these linkages and that they strategically orchestrate public policy — in the form of research and development subsidies and protected domestic markets — to capture vital market shares in these strategic industries. American trade policy institutions have heretofore rejected this approach and are believed by many to be incapable of mounting a strategy to counter active foreign trade policies. Some analysts believe, therefore, that new institutions are required to accomplish these important tasks.

B. OPPOSING VIEWS — SMART PEOPLE DISAGREE[4]

There are at least three grounds for disagreement about competitive conditions in the United States among those who have examined the issues carefully. There are methodological disputes, disagreements about the interpretation of macroeconomic events, and disagreements about the interpretation of sectoral economic events. These are discussed in this section. There are also areas of agreement, which are discussed in the following section. It is in these latter areas that the Department of Defense can most effectively contribute by using its influence in the economic policy arena.

Methodological disagreements pervade the competitiveness debate. Disputes concern both the nature of economic causation (and therefore the selection of the economic phenomena to be explored) and the accuracy of various measures of economic health. On the issue of what causes countries to export and import the mix of commodities they do, for example, (an issue of central importance to understanding international competitiveness), there are differences in approach. While some focus on the distribution of existing stocks of physical and human resources between countries to justify the changing patterns of trade (the so-called "comparative advantage"), others concentrate on the capability for collective action to

[4]See, for example, R.Z. Lawrence, ***Can America Compete***? Brookings Institution, 1984; ***U.S. International Competitiveness: Perception and Reality***, New York Stock Exchange, Office of Economic Research, August 1984; "Industrial Change and Public Policy," The Federal Reserve Bank of Kansas City, August 1983; and R.D. Norton "Industrial Policy and American Renewal," ***Journal of Economic Literature***, March 1986.

purposefully alter patterns of trade. The process of economic causation that underlies these two views is the subject of continuing debate.[5]

Another very important methodological issue concerns the definition of *competitiveness*. The definition given in the previous section is absolute. Competitiveness is measured only by America's ability to achieve certain objectives. Others have approached the issue from the standpoint of our economy's performance relative to our major competitors, as well as to our own past performance, and have found the United States to be competitive. From this relative perspective, American performance is claimed to have been good with respect to: manufacturing employment, capital formation, research and development spending, productivity, and the responsiveness of our economy in shifting from low–growth to high–growth industries.[6]

A final methodological issue is the selection of evidence for assessing competitiveness. There are definite limits on the quality and applicability of the various indicators of economic vitality.[7] These limits are only rarely discussed by advocates of the various policy positions.

Legitimate disagreement also attends the interpretation of the macro–economic evidence of economic decline. As pointed out in the discussion of methodological issues above, for example, some of the phenomena that constitute evidence of absolute competitive decline may at the same time provide evidence of relative economic success. Moreover, some have argued that the causes of any *apparent* deterioration of our international competitiveness have been macro–economic in nature, for example, strong domestic economic growth relative to our major competitors and exchange rate patterns, rather than resulting from

[5]Krugman, in ***Industrial Change and Public Policy***, *op. cit.*, pp. 139–153 and "Is Free Trade Passe?", ***Economic Perspective***, Fall 1987; Robert M. Stern, "Testing Trade Theories," in P.B. Kenan (ed), ***International Trade and Finance: Frontiers of Research***, Cambridge University Press, 1976; and Linda Hasselman, "Trends in European Industrial Intervention" ***Cambridge Journal of Economics*** (7) 1983, esp. pp. 204–206.

[6]Lawrence, *op. cit.*, pp 23–25.

[7]For a review of the quality of various economic indicators see ***Supplement to Economic Indicators: Historical and Descriptive Background***, Joint Economic Committee, U.S. Congress, Washington, D.C., 1980; and F.J. Fabbozzi and H.I. Greenfield (eds), ***The Handbook of Economical and Financial Measures***, Dow Jones, 1984.

weaknesses of particular industries, low productivity, high unit labor costs, trade policies of competitor nations, or other presumed underlying weaknesses. [8]

There is also contention surrounding the appropriate public policy response to industry-specific events. In the first place, it is argued that the process of capitalist economic development is, has always been, and should be, one of continuing rise and fall of industries. Moreover, most *industries* are comprised of intra-sectoral strategic groups that respond quite differently to changing business conditions. While a broadly-defined industry may be experiencing decline, some of its strategic groups may be performing quite competitively. Policy aimed at encouraging *industry* health may discourage the competitive performance or health of intra-industry segments.

Finally, serious doubts have been expressed about our capability to define a reasonable standard through which to foster particular industries. Our capability to successfully pick *winners* and *losers* is believed by many to be inadequate. [9]

C. AREAS OF AGREEMENT

Despite the many disagreements about the nature, scope, and policy implications of American competitiveness, there are many areas of agreement among analysts who seriously have assessed our competitive posture. In this section, the most important of these are discussed. The Department of Defense must act with caution in exercising its influence in such a non-traditional policy area. By focusing its efforts on policy areas where broad agreement exists among experts, the Department can exercise appropriate prudence and at the same time not be paralyzed by disputes about difficult issues and policy choices.

First, most agree that the nature and causes of American competitive positions are very complex. Remedies must be multi-dimensional and probably will yield results only over the long term.

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[8] See, for example, ***The Economic Report of the President***, 1987, pp. 97-123; and J.C. Hilke and P.B. Nelson, ***International Competitiveness and the Trade Deficit***, Federal Trade Commission, May 1987.

[9] See Krugman, "Targeted Industrial Policies: Theory and Evidence," in ***Industrial Change and Public Policy***, *op.cit.*; and C. Schultze, "Industrial Policy: A Dissent" ***Brookings Review***, Fall 1983, pp. 3-12.

Second, most agree that we have a host of policies, laws and regulations — tax laws, monetary policies, antitrust laws, export controls, laws protecting intellectual property rights, congressional appropriations, customs duties — that constitute the environment in which domestic and foreign enterprises conduct business. There is further broad agreement that this de facto *industrial policy* is, at best, incoherent and, at worst, counterproductive. Some effort should be taken to correct this situation to the degree that our political traditions allow.

Third, there is substantial agreement concerning many trade–related issues, including the perception that progress toward free world trade is increasingly threatened by protectionist sentiments and trading practices not regulated by the General Agreement on Tariffs and Trade. There are, of course, major disagreements on what to do about these shared perceptions.

Fourth, there is considerable agreement on the need for increased analytical capability for determining the extent of foreign and domestic Government support for industry and for assessing the inconsistencies in our domestic policies toward industry.

Fifth, there is keen recognition that several sectors of our economy have suffered setbacks in the face of international competition, but that the visibility of these industries has tended to overshadow the vitality of many other sectors from which lessons can be learned.

Sixth, in the areas of education policy, tax policy, research and development policy, and regulatory policy, there is much that is not being done, but that could be done, to improve the quality and flexibility of our nation's pool of human resources and the ability of our industries to compete more effectively in the international marketplace.

Finally, most agree the Department of Defense has a unique responsibility to formulate coherent policies both to foster a reliable defense industrial base and to reduce the cost of its purchases. It is further recognized that the Department has a unique responsibility to mitigate threats to our security posture which arise from distortions of normal patterns of industrial growth and development.

D. SUMMARY AND CONCLUSIONS

The analytical and policy problems that shape the debate on American competitiveness are extremely complex. It is clear that America's economy is in the midst of a period of structural adjustment. This adjustment has spawned an intense economic policy debate about the appropriate response to the changing composition of American industry. The Department of Defense has a stake in the outcome of the debate, both because the overall health of the economy is important to the Defense mission and because of the vexing issues that surround the health of particular industries upon which our defense is dependent.

Our response must have two major thrusts. First, there are broad areas of agreement among policy analysts for the need to develop rational and effective linkages among the practices, regulations, and laws that together define the environment in which our industries operate. Although the Department is not responsible for economic policy, the Department of Defense must do its part to foster and cooperate in such an effort. Second, the Department of Defense must develop a strategy to improve the capabilities of the defense industrial base. Such a capability has two parts. One is the capability to coordinate acquisition policy. This is in itself a difficult political problem requiring the cooperation of the Military Departments and of the Congress. This capability must draw upon recent progress stimulated by the report of the President's Blue Ribbon Commission on Defense Management (the *Packard Commission*), the creation of the position of Under Secretary of Defense (Acquisition), and the Defense Reorganization Act in general. At the same time, the Department of Defense requires a synchronized capability to analyze the structure and performance of *critical industries*; the impacts on these industries of changes in economic policy, acquisition policy, and conditions of international trade; and the development and evaluation of policy instruments aimed at fostering a healthy defense industrial base and contributing to sustainment of a healthy national industrial base.

CHAPTER III
NATIONAL POLICY ISSUES

The United States Government focus on the domestic marketplace generally has emphasized protecting the public against business excesses, rather than also promoting the health of American industries. Nevertheless, the fundamental characteristics of the United States economic system have provided an environment conducive to business success. The freedom to reap the rewards of hard work and innovation has stimulated the creation of enormous wealth, providing American industries with the resources and markets necessary to lead the world in output and technology. In essence, American businesses have not needed Government support to flourish, although these businesses have benefited from research and development funding and purchases tied to Government programs.

While the strengths of the United States economic system have not changed, the market environment for American industries has. The change has been caused by two trends:

- Physical barriers to international trade have been greatly reduced by advances in transportation and communication technologies, causing an evolution from separate national markets to a single, integrated world market;
- Foreign governments have adopted aggressive strategies of economic development, through direct and indirect subsidies to develop and maintain indigenous industries, the promotion of exports, and the creation of import barriers.

United States institutions have not responded adequately or quickly enough to basic shifts in economic and manufacturing power among nations. More recently, American technological leadership also has begun to erode. Effective remedial actions are possible, given the national will to undertake them. However, many of the options available to the nation are beyond the traditional scope of responsibility and authority of the Department of Defense. Nevertheless, these options are critically important to the nation's security, and, in the process of addressing them, a security viewpoint must be considered.

This section summarizes a range of views on the underlying causes of declining American industrial competitiveness, as identified by both Government and private-sector participants in this effort. Not surprisingly, the causes they identified are consistent with those

identified in the report of the President's Commission on Industrial Competitiveness and in a great many recent private-sector examinations of the problem.

In this section, causes of the competitiveness problem are grouped into three major categories. The first category addresses management issues. These are particularly sensitive for Government to address without unacceptable intrusions into the private sector. Nevertheless, management is an issue that must be addressed in a continuing public forum on the future economic well-being and security of the United States.

The second category addresses Federal Government policies and practices that directly or indirectly affect the competitiveness of American industry. The third category addresses educational and cultural issues. Education issues might properly be a sub-set of the Government policies category, but are grouped separately because they are long-term and fundamental in nature, and involve Government at all levels, as well as the private sector. This category also addresses national cultural issues, which are broad, common, and inherently difficult to resolve. The Department of Defense has little capability to address or to influence these issues. Even the civil agencies and departments will find these difficult to address. There clearly is a role for the Government, however, beginning with the need to stimulate greater awareness of the problems we face and to build a national consensus to resolve them.

A. MANUFACTURING MANAGEMENT ISSUES

Management issues consistently were identified by participants from industry and academia as the most important causes of declining American industrial competitiveness. There was a general consensus among these participants that American management culture and practices are less effective in the global marketplace than those of foreign firms. Industrial and academic participants in this effort identified numerous specific management practices they considered harmful to American competitiveness.

There are historical reasons for current deficiencies. In the 1950s and 1960s, American industry dominated world manufacturing. American manufacturers could focus on quantity to the neglect of quality. American manufacturers were complacent, while other countries began building powerful new industrial infrastructures and developing superior process technology to manufacture easily-obtained American product designs and

technology. Among the results of this period that persist today are many senior managers who continue to view the nature of markets as national, not international, and the nature of product requirements as *good enough*, not *world class*.

B. GOVERNMENT POLICIES AND PRACTICES

Many Federal Government policies and practices reduce the competitiveness of American manufacturing companies. These policies and practices tend to be concentrated in the areas of tax, regulation, and antitrust enforcement, but they also range broadly over a number of other areas, including government attitudes toward domestic industry.

Some of America's trading partners have taken an aggressive approach to gaining, maintaining, and expanding market share in the United States, with substantial assistance from their governments. Other governments have helped give key technologies a head start and helped coordinate development, marketing, and pricing approaches by their manufacturers. In addition to aiding their own industries' technological efforts and exports, other governments have also created formidable non-tariff and tariff barriers to imports. The policies of other governments to subsidize and protect their industries are not matched by the United States Government. United States Government policies and actions to *level the playing field* in international trade have been inadequate.

Stronger, more focused efforts are required to create a "level playing field," particularly with respect to manufactured products. For example, United States tax laws should differentiate between *wealth-producing* activities and *wealth-redistributing* activities in treating amortization and depreciation. Productive investment could receive more favorable tax treatment than such activities as stock market speculation. Rare instances of United States Government efforts to foster domestic manufacturing are best characterized as efforts to correct the results of prior neglect, and usually focus on lagging rather than leading industries.

United States Government neglect of industrial competitiveness extends beyond the capital base and industrial technology. Compared with some other governments, the United States Government also has done very little to provide or to stimulate worker training and re-training programs in manufacturing. Limited efforts thus far have emphasized

retraining workers from declining industries, and some officials believe that even such limited efforts are best left to the private sector.

The absence of a focal point in the United States Government to analyze comprehensively our policies and practices toward the industrial base in such areas as tax laws, procurement rules, research and development policy, and technology transfer policy seriously limits the Government's ability to evaluate the elements of American competitiveness. In addition, the lack of sufficient knowledge of the potential impact of proposed laws or policies on the industrial base often causes inadvertent but harmful results.

Many congressional and executive intrusions into the market have negative impacts on the competitiveness of American manufacturing industries. The tax code, antitrust laws, and Department of Defense acquisition policies frequently discourage investment in domestic production facilities and innovation by domestic producers. Some elements of United States law, appropriate when the United States was a more self–contained economy, now are harmful to American industry in a global market. Actions to adjust these laws to the conditions of a more international marketplace have been slow and inadequate.

Modern telecommunications and transportation systems have reduced significantly the barriers to international trade by reducing *long–distance* costs. This has enabled producers to compete for market share external to their domestic markets. Other countries, particularly Japan, have taken advantage of this new market environment. American producers, however, have been slow to respond. For example, while total United States investment in research and development is proportionately equivalent to that of Japan, the Japanese do not invest heavily in defense research and development. Consequently, they are able to invest proportionally more in research and development for commercial products and processes. They also invest more in capital equipment. Relative to Japan, American firms are *underinvested*. The Japanese worker reportedly is supported by about $48,000 in capital investment in contrast to about $32,000 for the American worker.

Tax Policies

The absence of incentives in tax law for training of the workforce, investment in new plant, equipment, and process technology, and doubts about continuation of incentives

for research and development detract from the ability of American industry to remain competitive. Relative to other industrialized nations, America's tax system provides little or no incentive for long-term investments. Capital gains and earnings on savings and investments are taxed as ordinary income at relatively high rates, while consumption generally is taxed at a low rate, if at all. This stimulates consumption rather than saving, and results in reduced capital for industrial modernization and technological development.

Elimination of tax incentives for domestic investment has reinforced the trend to foreign sourcing and reduced the potentially beneficial effects of a weaker dollar on investment decisions of American firms. A corollary effect of the elimination of investment tax incentives in 1986 is a weakening of the domestic supplier base. These effects of tax law changes may be partially offset in the future by lower tax rates, but the nature and extent of the impact of lower rates on investment decisions are not yet apparent.

The American tax system at all levels of government places a heavy tax burden on American industry (for example: income, property, and labor taxes) but not on equivalent products manufactured elsewhere and sold in the United States. Many countries use a value-added tax to ensure that the products of both domestic and foreign producers are taxed equally and fairly, and, because of the value-added tax, are able to minimize other direct (and unequal) taxes on their domestic industries.

Regulatory Policies

During the decades of the 1960s and 1970s, American requirements for emissions, safety, and environmental controls imposed large *non-productive* costs on American manufacturers at the expense of additional investments in productivity improvements. This broad range of socially desirable laws had, and continues to have, a major impact on manufacturing costs in the United States and, in some industries (forgings, castings, and specialty chemicals), has severely damaged American industries' ability to compete. These controls, as well as the costs of documenting compliance with other requirements, such as equal employment opportunity, are indirect but substantial taxes imposed on the products of American manufacturers but not on foreign products sold in the United States. Similar environmental requirements are now being imposed by some governments elsewhere, but industries in these countries are able to apply American-developed technologies at much lower

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cost than was incurred by the American industries that were forced to develop the technologies, as well as to implement them.

Product liability laws and court awards are becoming a major issue in the United States. Test and evaluation requirements necessary to protect firms against lawsuits are becoming very costly. The problem is magnified by the tendency of the courts to hold the original manufacturer responsible, even when substandard replacement parts have been used in the product. The impact on American manufacturers is generally much greater because these manufacturers are liable for the products sold to American consumers during the 1960s and 1970s when foreign products had made few inroads into the United States market. In some cases, American firms are forced to raise the prices of new products to enable them to cover the liability costs associated with products 20 or 30 years old.

Antitrust Policies

As American industries increasingly are pitted against foreign government-led consortia, restrictions imposed by the Sherman Antitrust Act, the Robinson–Patman Act, the Clayton Act, and other antitrust laws become increasingly irrelevant and harmful to the international competitiveness of American industry. In particular, antitrust laws and regulations that impede cooperative research and development by American firms in both process and product technology are harmful. Restrictions were eased by the provisions of the National Cooperative Research Act of 1984. But many manufacturers still feel constrained by continuing uncertainty with respect to applications of this body of law, which still creates substantial risks for companies in joint ventures.

Currency Exchange Rates

The high value of the dollar in recent years, relative to our major trading partners' currencies (notably the Japanese yen and West German mark), made American–manufactured goods less competitive in world markets (including in the United States). It also influenced business decisions of American manufacturers — encouraging foreign–sourcing, migration of manufacturing facilities, deferral of American factory or product upgrades, and redeployment of capital out of manufacturing altogether. Exchange rates

enabled American firms to purchase products and to invest in facilities overseas at less cost than in the United States. Even with a weaker dollar, it has proven difficult to reverse the trend. However, exports of manufactured products recently have surged and there are preliminary indications of investment decision trends favoring United States facilities rather than foreign.

C. EDUCATIONAL AND CULTURAL ISSUES

The American educational system does not produce the required numbers and skill levels of scientists, engineers, and technicians to support advanced manufacturing needs. Evidence suggests that the manufacturing workforce in some other countries may be better educated and trained than in the United States. For example, Japanese high school graduates appear to be much better educated in math, science, and technology than their American counterparts.

Skill levels of many American high school graduates are not adequate, and firms often must invest in programs to upgrade basic reading and math skills. Such results suggest that a system of high–quality technica! schools providing skills in applied mathematics, machining, manufacturing methods and technologies, and fundamentals of technology management could be an effective means of providing highly skilled and motivated workers. Such a system might provide a constructive alternative for students who do not wish to or are unable to pursue a university education.

In large measure, the inability of American managers to achieve results in manufacturing equal to those of Japanese managers in the United States stems from management theory and practice, as taught in American universities (where for example, good management is management by financial control; good managers can manage anything; individual achievement is important, not teamwork; manufacturing is an unimportant function). Engineering schools in American universities also focus inadequately on manufacturing, training engineers for careers in product research and development. Few faculty members have industrial experience or expertise. Emphasis on specialization results in engineering professionals who are ill–equipped to understand total manufacturing systems.

There also is an increasingly severe shortage of adequately trained scientific and engineering students flowing from American universities. American industrial laboratories and graduate schools in science and engineering are heavily populated by citizens of other countries. Almost half of the students in American graduate science and engineering schools are foreign.

Beyond the university level, American industry lacks adequate programs to provide continuing professional education and training to engineers and production workers. Continuing education and training programs in American industrial firms are often weak, ineffective, or non–existent. Stimulation of continuing education and training through tax incentives, Department of Defense contract incentives, and other Government efforts could be highly–productive and cost–effective.

American industrial competitiveness problems also are affected by a number of issues that can accurately be characterized as endemic to the American business culture. Clearly endemic problems, as discussed below, are among the most difficult to address effectively or to resolve. Equally clear, changes can be achieved only through broad national understanding and cooperative efforts.

Fundamental Skills

There is a widely perceived failure of American institutions to instill basic skills in our citizens. The general lack of familiarity with foreign languages and cultures in the United States population detracts from American international competitiveness. In years past, American business had little need to understand foreign markets. The United States economy consumed such a large portion of manufactured goods produced worldwide that foreign markets were not particularly important. Moreover, American goods were so superior to foreign goods that little competition existed for foreign sales. However, these market conditions have long since changed. The United States economy's share of total world consumption has declined substantially, and foreign–made products have equaled or surpassed their American–made counterparts in many instances. American society has been slow to respond to these changes. American products are less competitive in foreign markets because they are rarely designed to appeal to the cultural peculiarities of foreign consumers. American businessmen are at a disadvantage with their foreign competitors in understanding overseas mar-

kets and accessing technological advances made in these markets due to a general lack of foreign language skills. Language barriers pose a particularly difficult problem for American firms. Japanese and Europeans need only learn English to compete effectively in the world's largest market, but Americans must learn several languages to be as effective overseas.

There has been too little stimulus for the national effort required to change national attitudes toward work, to improve our educational systems, to emphasize needed skills, and to eliminate Government policies which adversely affect American performance in the world marketplace.

Awareness of the Problem

The absence of a national understanding (and Department of Defense understanding) that a healthy, productive manufacturing base is essential to our security greatly complicates efforts to develop and implement remedial measures. Manufacturing strength is needed to ensure that our armed forces can acquire the best weapons, and in quantities needed, to deter and defeat potential adversaries. Such strength encompasses commercial, as well as military production capacity. Commercial capacity adds the financial strength necessary to support research and development and capital investment and provides production resources that could be converted or diverted to military needs under emergency conditions.

Adversarial Relations

The deeply ingrained adversarial relationships between Government and industry and between management and labor are major causes of declining American industrial competitiveness. The relationship between the Government and industry is characterized by Government constraints on industry behavior intended to protect the public good against profiteering and shoddy performance; and by industry performance *by the numbers* to stay within Government constraints and to document compliance. The relationship between management and labor also is adversarial.

These adversarial relationships undermine industrial efficiency, responsiveness, and technological innovation. This Government–industry relationship forces industry to operate within an extremely restrictive environment and discourages (or even penalizes) innova-

tive behavior. Considerable industry effort is invested in satisfying Government paperwork requirements and responding to Government meddling in the manufacturing process.

The management–labor relationship prevents cooperative efforts to identify and implement innovative processes and tends to hold labor productivity to some minimal standard, actively inhibiting any worker capability or desire to improve. Historical barriers to cooperation between management and labor are only beginning to fall, and at much too slow a rate. There is not yet a pervasive sense of shared interests and objectives for the common good.

Other countries (Japan in particular) are much more effective than the United States in achieving industry/Government/labor cooperation on process and product development, and, through cooperation, are more effective in implementing new ideas to make manufacturing more efficient, responsive, and technologically advanced.

Short–Term Focus

American society, historically, has been action oriented and sharply focused on quick results. The short–term expectations that pervade American society have become a major impediment to the long–term planning necessary to compete effectively with other countries.

The equity market is the major source of capital for American industry, in contrast to Japan, where commercial banks are the principal providers of capital to industry. The American stock market is driven by short–term expectations, whereas Japanese banks historically have supported long–term investment. Short–term pressures in the American stock market are increasingly being exacerbated by large institutional investors, whose managers themselves are evaluated on short–term performance. Many of these are non–profit funds (for example, pension funds) that are free to move quickly in the market without regard for tax consequences, and, therefore, to increase the short–term volatility of the market.

Short–term profit expectation has emerged as an important reason for the relative lack of effectiveness of American technology–based businesses. There is a lack of understanding and acceptance in the investment community and the general public of the need for *decade plans* for technology–based businesses. Financial markets that place a premium on

short–term results may penalize a long–term orientation by reduced stock values, forced mergers, or hostile takeovers. Conversely, the Japanese (in particular) and Europeans are oriented more toward long–term results, with increasing success.

Lack of Manufacturing Prestige

The attitude in the United States toward manufacturing and manufacturing technology is somewhat negative. American universities have little to offer in these fields. Even within the manufacturing firm, research and design engineers are perceived to have more prestige than manufacturing engineers. One result is that the manufacturing function does not compete effectively for high–quality personnel. (Conversely, the Japanese have a high regard for manufacturing and are totally committed to innovation in both process and product.) These attitudes (and resultant rewards systems) toward manufacturing careers often prevent the best people from beginning or sustaining careers in manufacturing.

CHAPTER IV
DEFENSE POLICY ISSUES

In seeking more comprehensive information on the health of the defense industrial base, the Department of Defense sought to evaluate whether the overall strength of our industrial base masks any weaknesses in individual defense-critical industries.

The Defense Economic Impact Modeling System and other tools were used to identify defense-critical industries. Critical industries are those in which the majority of the Department of Defense budget is spent, directly and indirectly, as well as industries vital to defense production. Two hundred fifteen individual industries were identified, accounting for about 95 percent of Department of Defense purchases from the manufacturing sector. A series of six indicators was developed and applied to each industry: import share of the domestic market; growth in capacity; growth in shipments; capital expenditures expressed as a ratio to industry shipments; productivity growth; and profitability. Comparisons based on the indicators were then drawn between defense-critical industries and the overall United States manufacturing sector. Finally, a ranking of the critical defense industries based on a composite of all six indicators identified defense-critical industries with the poorest overall performance.

Based on this review, which covers the period from 1980 through 1985, we drew the following conclusions:

- Critical defense industries did no worse than overall manufacturers in maintaining a domestic market share in the face of substantial import growth;
- Critical defense industries did worse than overall manufacturers in terms of adding to productive capacity, with only 41 percent of critical defense industries matching or exceeding the overall manufacturing average growth in productive capacity;
- Three-quarters of critical defense industries achieved worse than average growth in real shipments;
- Sixty-two percent of critical defense industries had lower-than-average capital expenditures in 1980. This adverse trend continued in 1985, when 72 percent had lower-than-average capital expenditures;

- Forty-seven percent of critical defense industries had below-average productivity growth (17 actually had declining productivity);
- Critical defense industries achieved average or above average profitability.

These trends, while not definitive, are disturbing, particularly, with respect to indicators of future productivity and competitiveness.

A. THE DEPARTMENT OF DEFENSE MISSION

The mission of the Department of Defense is to provide for the common defense. Political and strategic realities require this to be accomplished through a worldwide military command structure. At the heart of the deterrent power of the United States military presence is an inventory of sophisticated military equipment and the human resources to manage and operate it. These resources are drawn and replenished, in large part, from the same pool of resources that fuel the general industrial economy.

As we look to the future, two fundamental problems threaten Department of Defense capabilities to maintain a modern inventory of qualitatively superior military equipment. The first is the environment in which the Department of Defense and industry conduct business. The high and rising costs of our major weapon systems appear driven by an acquisition system that encourages long acquisition cycles, high development and production costs, and sometimes obsolete technology. These problems most recently have been addressed by the *Packard Commission*. Some of the recommendations of the Commission have been implemented, others are in the process of being implemented, and others are under active consideration.

Yet, even if all of the Commission's recommendations were adopted and proved to be effective, a second problem would remain: many of the strategic industrial sectors that support the production of modern weapon systems are being threatened by intense, long-term competitive pressures from foreign producers. These include: semiconductors and semiconductor equipment, shipbuilding, automobiles, construction equipment, machine tools,

flexible manufacturing systems, ball and roller bearings, castings, forgings, steel, and ceramics, to list a few.[1]

We do not know with any degree of certainty how these developments ultimately will affect our national security. We do know that they give cause for concern. Our capacity to build or replace critical force structures independently of economic and political decisions of other sovereign powers is essential to our security. The Department of Defense, therefore, must ensure that its actions and policies (especially, but not exclusively, in the acquisition arena), as well as the actions and policies of other government institutions, do not weaken our manufacturing sector and thereby degrade our defense posture.

Department of Defense action must be sensitive to the general economic health of the nation. The Department's concern for the health of the manufacturing sector and for individual industries within that sector should not be construed as an endorsement of sectoral policies for the economy as a whole. On the other hand, the Department's competitiveness initiative has identified a number of national policy initiatives aimed at bolstering the general health of the manufacturing sector, and it is appropriate for the Department to provide a security perspective to influence actions by the appropriate agencies.

Neither the nation nor the Department of Defense can afford polices which do nothing but protect failing industries or firms. Not only would these aggravate the weapon systems cost-growth problems identified by the *Packard Commission*, but, in the absence of counteracting incentives, such protection would undermine the competitiveness that this Department of Defense initiative aims to achieve. Protectionism also would be a threat to cooperative production agreements with our allies. The United States has encouraged a *two-way street* in military trade with our allies primarily as a means of balancing the costs of military alliances. The abrogation of such agreements by domestic interests may result in higher costs, reduced competitiveness, loss of interoperability, and, to this extent, should continue to be discouraged.

[1] ***U.S. Industrial Base Dependence/Vulnerability,*** Roderick L. Vawter, National Defense University, December 1986. Our sense of the term "strategic industry" is discussed in chapter II of this report.

B. SECURITY CONCERNS

From one perspective, there are at least four reasons why the Department of Defense is, and should be, concerned about the overall competitive health of the United States manufacturing base.

First, the Department has a direct responsibility toward the sectors of the economy that constitute the defense industrial base. In many of the transactions between the Department and the industries that produce the instruments of military deterrence, the influences of Government procurement regulations and a single–buyer market structure have created a unique business environment. The Department of Defense must pay close attention to how its policies (and the policies of other Government agencies and institutions) affect this business environment and the extent to which the ultimate objectives of assuring our security are served by this environment.

Second, the vitality of our manufacturing economy in general ultimately determines the war–fighting power of our nation's force structure. The economy's latent capability to enhance current forces in response to strategic threats is a critical element of our deterrence strategy.

Third, the Department of Defense is cognizant of its formative influence on the larger manufacturing economy. Through its impact on the employment of scientists, engineers, and factory workers, its research and development expenditures (particularly in advanced manufacturing technologies), and its role in fostering capital investment, the Department's influence on innovation and manufacturing far exceeds its relatively small share of expenditures in our national income accounts.

Finally, the weapon systems for our nation's defense are purchased, in the long–run, from revenues generated by a healthy and growing economy. Such economic growth has allowed the nation to pay for its defense. For many years, the cost of our worldwide security obligations has been less than seven percent of our gross national product.

C. DEPARTMENT OF DEFENSE CONCERNS

The report of the Defense Science Board Task Force on Defense Semiconductor Dependency published in February 1987 was directed specifically at the semiconductor problem, but many of its findings and conclusions are equally applicable to other lower-tier industries that, collectively, provide the technological backbone of advanced weapon systems.

Competitive pressures, particularly from Japan and the newly emerging, economically competitive countries of Asia — Taiwan, Hong Kong, Singapore, and Korea — as well as Western Europe, are contributing to the relative decline of industries that are important to America's defense. As in the semiconductor case, the Department of Defense is the buyer of relatively small portions of these industries' total output, but, nevertheless, is absolutely dependent on these industries for its weapon systems. In most of these industries, volume production for commercial markets is essential to controlling unit costs and maintaining world class standards of quality.

As the commercial base has eroded, technology leadership also has moved, or is moving, offshore because technology leadership is dependent on the commercial base for revenues to support research, development, and investment. Thus, while the Department of Defense has no direct responsibility for ensuring the vitality of commercial manufacturing in the United States, it is unable to meet its mission requirements effectively without a broadly capable industrial base.

In a growing number of industry segments, if current trends continue, the Department of Defense will be dependent on foreign-sourced hardware and technology in the acquisition of the technologically superior weapon systems that are fundamental to our strategy of offsetting numerical inferiority with technological superiority. Specific elements of Department of Defense concerns are discussed in the remaining paragraphs of this section.

Technology Leadership

There is a substantial body of evidence that technological leadership is irrevocably tied to manufacturing capacity and leadership. The revenues generated by successful manufacturing are essential to achieving and maintaining the levels of research and

development required for technological leadership. Without technological leadership, the Department of Defense cannot count on industry's ability to produce affordable, high–quality, state–of–the–art weapon systems. In many industry sectors that are key to defense production, the manufacturing base has declined, and as a result the Department of Defense (and the United States generally) is now beginning to experience the reality of declining technological leadership.

Foreign Ownership of American Manufacturing Facilities

The issue of foreign ownership of American manufacturing facilities has not received adequate attention. The most common view is that the rapidly increasing level of foreign ownership is beneficial to the United States. In this view, such investment reduces the magnitude of the trade deficit, provides jobs for Americans, and increases domestic tax revenues. This view overlooks economic issues such as the long–term impact on the current account of a continuing flow from the United States of repatriated profits and other fees. More importantly, it overlooks the fact that ownership tends to dictate the geographic location of the underlying technologies. Security concerns are not resolved by domestic manufacturing facilities that are dependent on technologies controlled by other nations.

Manufacturing Technologies

Particularly devastating in the long–term is the loss of key production technologies and equipment. In some vitally important technologies, the battle may already have been lost.

Numerically–controlled and computer numerically–controlled machine tools (developed in the United States with Department of Defense funds) represent one such critical technology where the lead already has shifted. The fact of lost leadership is reflected in procurements by American manufacturers of advanced machine tools from Europe and Japan. Cost is often quoted as a determining factor in the decision to buy foreign tools. Delivery terms are another factor. But the decision is most often made on the basis of quality and advanced features.

Electronics manufacturing equipment is another example of this destructive trend. American semiconductor manufacturers, increasingly hard-pressed by foreign competitors, have survival as their primary goal. In many categories of semiconductor manufacturing equipment, the technological lead clearly has passed to other nations, primarily Japan, and American semiconductor manufacturers are buying Japanese manufacturing equipment because it is the best available.

This is but the leading edge of scores of technologies where other nations are developing the most advanced manufacturing technologies for the most advanced products. Such loss of supremacy in manufacturing technologies is a particularly insidious threat to American technological and manufacturing leadership. As long as foreign state-of-the-art manufacturing equipment continues to be commercially available to American manufacturers (and they elect to purchase it), the decline of equivalent American equipment industries barely is noticed until an evolutionary process reaches crisis proportions.

The decline of manufacturing equipment industries is of particular concern to the Department of Defense. As long as state-of-the-art production equipment is manufactured in the United States, there is a substantial capability to reconstitute or expand American product industries. However, without the basic tools for manufacturing, this capability virtually disappears, leaving United States security vulnerable to the political and economic processes of other nations.

Foreign Dependencies

Foreign sourcing of key parts, components, and complete products is an extensive and growing business practice in both commercial and defense manufacturing. Foreign sourcing may evolve over time into foreign dependencies. Potential foreign dependencies are areas of concern. While this issue has been studied extensively on an *ad hoc* basis, and anecdotal evidence abounds, there are few, even moderately comprehensive studies of foreign-sourced components of key weapon systems.

The potential for divergent political or economic interests to disrupt the free flow of the most advanced technologies and products has never been addressed adequately in the few, limited American assessments of foreign dependencies. There was, perhaps, no need

for such assessments when the United States was the world leader in virtually all militarily critical technologies. This clearly is not the case today. Sole source dependencies on foreign technologies for essential weapon systems components are inherently risky.

D. UNDERLYING CAUSES OF COMPETITIVENESS PROBLEMS IN THE DEFENSE INDUSTRIAL BASE

This section presents brief summaries of Department of Defense–related causes of problems in the defense industrial base. With one exception, the order of presentation is not intended to imply priority or relative importance. The exception, which is considered to be fundamental to further progress in improving the competitiveness of American defense manufacturing industries, is the necessity to establish permanent organizational structures within the Department dedicated to manufacturing excellence.

Program and Budget Instability

Constant budget turbulence, which makes effective long–term planning impossible, and frequent changes in the *rules of the game* (competition requirements, profitability, audit standards, etc.) are major impediments to achieving efficient manufacturing operations. These problems are aggravated by small volume procurements, year–to–year program uncertainties, and program stretch–outs that contribute to an environment in which Department of Defense contractors are unwilling to invest in systems for productivity or quality improvements. The rate of return on such investments is not only low, but uncertain as well. (It should be noted that after–the–fact estimates of the profits of defense firms are contested. The findings of the last major review of profits, the Defense Financial and Investment Review (DFAIR), a 1985 Department of Defense study, are contested by the United States General Accounting Office. The study also has been characterized by a major investment banking firm as "less than carefully conducted.") Despite the lack of precise data, participants in this current effort believe that defense business traditionally has earned a low rate of profit; but that other factors, such as cash flow and certainty of return, have compensated for this. Recent changes are reducing or eliminating these incentives as well. This is particularly damaging in the case of diversified companies or electronics subcontractors, who can — and do — disinvest from defense.

Competition, as currently practiced by the Department of Defense, adds another reason for contractors not to invest in product or process research and development because of the likelihood that the Government will require the results of their investment to be transferred to competitors.

Absence of Market Incentives

The absence of normal market incentives in Department of Defense procurements is a barrier to efficient operations. Unit cost reductions, quality improvements, shortened delivery times, etc., do not stimulate demand for additional units or provide greater market share, nor do unit cost reductions result in increased profit (more often, the reverse is true). Increased investment in plant, equipment, training, etc., has no direct bearing on future contracts. A superior product or manufacturing process will not yield either higher profits or improved market share. The absence of such normal market incentives and rewards is compensated for by massive government efforts to prescribe substitute control mechanisms, which are themselves barriers to improvement.

Department of Defense Procurement Policies

In the very forthright views of the experts we consulted, Department of Defense procurement policies and regulations contain many characteristics which inhibit achievement of manufacturing excellence, including:

- Emphasis on price, which forces short cuts and reduces incentives for investments in new equipment and quality systems;
- Evaluation criteria focused totally on product performance, at the expense of producibility and reliability;
- Emphasis on forcing contractors to fund (and assume risk for) program specific tooling, test equipment, etc.;
- The absence of risk-sharing for innovation;
- Emphasis on low acquisition cost and schedule compliance, to the virtual exclusion of low life cycle cost (quality, maintainability, ease of use);

- Intense pressure on profits—down to levels that virtually guarantee the contractor will have very limited ability to invest in future productivity programs.

Department of Defense Organization for Acquisition Management

The manner in which the Department of Defense is organized to manage acquisition is a barrier to efficient manufacturing: functional segmentation (for example, between the procuring contracting officer, administrative contracting officer, plant representatives, Defense Contract Administration Service, Defense Contract Audit Agency, etc.) causes contractors to organize reactively (and defensively) along similar lines, to the detriment of efficient operations.

The organizational problem was exacerbated by lack of discipline in the system. Practices vary significantly from one procurement office to another and from one Military Department to another. Different Government agencies (Defense Contract Administration Service, Air Force Contract Management Division, National Aeronautics and Space Administration, etc.) assigned surveillance responsibilities over multi-divisional companies apply agency/Military Department unique rules, regulations, procedures, etc., with extremely adverse impact on company efficiency and costs. Requirements and procedures are also inconsistent from one type of procurement to another. Different rules apply for production spares and replenishment spares. Primes are required to test purchased components, but the Department of Defense does not test the same components when it buys them directly from the supplier.

Emphasis on Competition

Since the inception of offices of competition advocates in each of the Military Departments and competition advocates in all major buying commands, the Department of Defense has emphasized competition on the basis of initial production price, sometimes virtually ignoring contractors' capabilities and records for quality and timely performance, as well as down-stream (life cycle) costs. Frequently, price competition does not provide the best value to the Government. Emphasis, under the Competition in Contracting Act, on low-cost

bidders favors companies who bid fully depreciated equipment and hurts those with modern facilities. The emphasis should shift to quality and responsiveness.

Product and Process Specification

The Department's heavy reliance upon process and production specifications is frequently counterproductive. Components are required to be manufactured by processes and to standards which are not state–of–the–art and which do not provide the best product at the best price. The manufacturer, who has the greatest expertise, has little voice in component design or manufacturing processes.

Lack of consistency and uniformity in product and process specifications among various Government agencies also has adverse impact on contractor operations and costs (for example, there have even been instances where occupational safety and health requirements prohibit manufacturing to Department of Defense specifications).

Life Cycle Costing

Logistic support analysis requirements included in many contracts provide the information required for effective life cycle costing (human resources and training requirements, support equipment requirements, spare parts requirements, etc.), but Government personnel rarely use the data effectively. Most Department of Defense contracting officers focus totally on acquisition cost and pay little attention to the concept of total life cycle costing.

Life cycle costs are inherently less certain than acquisition costs, and Government decisionmakers are less willing to assume the risk of relying on life–cycle projections. The Department has no adequate means to monitor and evaluate actual versus projected life cycle costs (and, hence, no means to gain additional confidence in evaluating contractors' projected life cycle costs).

Subcontractors and Suppliers

The Department of Defense procurement processes are focused on prime contractors, even though purchased materials and components supplied by subcontractors represent 50 to 85 percent of the total cost. The Department does not require or encourage vendors' participation in strategic planning decisions or design processes. In fact, requirements of the competition advocates for *free and open* price competition for subcontractors and suppliers have the effect of keeping the supplier base in constant turmoil and makes it virtually impossible for defense contractors to build a stable base of reliable, high quality, cost-effective vendors. This is the opposite of the practice generally credited for the high quality of Japanese products.

Emphasis on price competition by the Congress and the Department of Defense effectively precludes the development of long-term relationships between prime contractors and suppliers and stimulates an adversarial relationship between them. The absence of long-term relationships does not permit extended, cooperative design, development, and manufacturing exchanges between the primes and suppliers. Little or no emphasis is placed on value analysis or value engineering by suppliers or their primes.

Annual price competitions are weakened by the refusal of many of the best-qualified suppliers to participate due to their reluctance to become involved in complex, expensive, and non-productive Government rules and regulations. Many desirable, highly-qualified suppliers refuse to do business with defense prime contractors because of the sheer weight of compliance with the body of laws, regulations, rules, and procedures that primes are required to pass through from the Government to them. This narrows the range of potential suppliers and reduces competition.

From the prime contractors' point of view, the flow-down requirements for subcontracts are virtually impossible to administer on the limited margin allowed by the Department of Defense. Small and disadvantaged business set-aside requirements imposed on defense prime contractors (together with excessive requirements for record-keeping and reporting and multiple, uncoordinated compliance reviews) further increase the administrative costs of doing business with the Department of Defense and may result in the lower quality and/or higher cost of purchased components.

Contract Administration

Multiple layers and large numbers of Government overseers, inspectors, and auditors (Army/Navy/Air Force plant representative offices, the Defense Contract Administration Service, administrative contracting offices, the Defense Contract Audit Agency, etc.), many of whom are resident in contractors' facilities, add significantly to the costs of doing business with the Department of Defense.

One result of the Government's heavy emphasis on oversight activities is that management focuses its attention more on passing audits and inspections than on improving quality and productivity. Many defense contractors believe that the Government's practice of imposing layer-upon-layer of quality inspectors and after-the-fact quality controls actually inhibits the development of modern systems such as statistical process control and other effective quality systems.

Management Issues

For firms in the defense industrial base, factors other than engineering excellence, innovation, and product quality often determine success or failure. These include their political constituency and the effectiveness of Washington lobbying efforts (both of which tend to restrict competition). Even management skills must be different. The need to have detailed knowledge of the *ins and outs* of the procurement process, the patience to deal with the process, and large and capable staffs of *documenters* to comply with reporting/compliance requirements imposed by the Department of Defense and Congress all are skills virtually unknown outside defense business.

For defense contractors, as compared with commercial manufacturers, management has a much smaller impact because of the degree to which contractors' operations are controlled and limited by the Department and the Congress. Micromanagement of defense programs and budgets and of contractor operations, a strong tendency to legislate broad remedies in response to isolated *horror stories*, and continuing use of defense procurements as instruments of social policy all are examples of Departmental and congressional activities that significantly add to the Department's costs and impede efficient, professional procurement efforts.

Many defense contractors feel that modern manufacturing management techniques (just-in-time inventory control, statistical process control, etc.) do not apply to them because of limitations imposed by Department of Defense rules, regulations and practices. For example, a large bureaucracy dedicated to *inspecting in* quality severely restricts contractors' incentives and ability to apply statistical process controls to *build in* quality.

It is difficult, to use another example, for a defense contractor to establish a research and development strategy, and difficult to measure its effectiveness. Research and development productivity in the private sector is controlled by strategic planning, resource allocation, and corporate culture. In defense industry, contractors have little control over the first two factors (which are largely controlled by Government budget decisions and regulations).

Emphasis on meeting specifications also reduces incentives for quality and innovation. Non-defense companies tend to be more efficient and innovative, not because their people are better, but because they are free of the restrictions imposed by the Congress and the Department of Defense.

CHAPTER V
BOLSTERING INDUSTRIAL COMPETITIVENESS

The several hundreds of Government and private sector experts who contributed to this effort were extremely forthright — frequently even harsh — in their assessments of the problems in our manufacturing base attributable to private sector managers, Government policies, and most notably, Department of Defense policies and practices. We seriously have evaluated their contributions and have attempted to report those assessments faithfully and act upon them effectively.

Over the course of this effort, we determined that a significant number of required improvements are possible within the existing authority of the Department. In fact, we identified numerous ongoing Departmental programs and recent initiatives to improve manufacturing operations in the defense industrial base. These include a number of actions that relate directly to the conclusions and recommendations of this report.

There are other recommended actions that primarily are directed to the Department of Defense, but will require coordination with the Congress and other departments and agencies of the Executive Branch. Finally, there are recommendations for action by the Government that clearly are beyond the scope of Department of Defense responsibility and authority. For these, the Department of Defense urges prompt consideration by the appropriate authorities.

CONCLUSIONS AND RECOMMENDATIONS

The remaining portion of this section contains 19 conclusions and recommendations for action by the Department of Defense and other Government departments and agencies. The order of presentation generally corresponds with our six major thrusts: (1) forging the right relations with industry; (2) improving the acquisition system; (3) establishing defense industrial strategic plans that support our military strategic plans; (4) developing manufacturing capabilities concurrent with the development of weapon systems; (5) laying the foundation now for the technical skill base required for tomorrow's defense needs ; and (6) ensuring that

industrial base issues important to our defense benefit from the full spectrum of potential policy remedies, when appropriate.

Forging the Right Relations With Industry

Conclusion

The Department of Defense ability to meet the materiel needs of our security objectives relies on the private sector and is being impeded by an exaggerated adversarial relationship. Lack of trust on both sides, perhaps fully justified, creates an environment in which significant improvements are increasingly difficult.

Discussion

Regardless of the source of distrust, there is a powerful need to build a cooperative relationship between the Department of Defense and industry that will lower barriers to improvements, enable more effective policy development and implementation, and contribute to the national goal of a strong industrial base.

This could be accomplished by creating a mechanism that would contribute to better understanding and consistency of effort by enabling senior industry managers (while avoiding any possible conflict of interest) to participate in the analysis of priority issues and alternative solutions.

Two bodies, a Manufacturing Advisory Council and a Defense Manufacturing Board might function in similar ways, but in different environments. The Manufacturing Advisory Council's activities would be focused on public policy issues and national economic issues relating to manufacturing, and would provide the Department an essential linkage to civilian issues, programs, and policy options in these areas.

The Defense Manufacturing Board would be established within the Department as a permanent entity, with a permanently assigned secretariat, or staff. Its functions would be keyed directly to defense manufacturing issues and problems. A key function would be to provide visibility to manufacturing and industrial base issues within the Department of Defense.

Recommendation

The Department of Defense should immediately begin to establish a non-adversarial means of communication between industry and the senior policymakers of the Department. Potential means to this end include establishment of:

a. A Manufacturing Advisory Council, sponsored by the National Academy of Sciences, an objective third party, and;

b. A Defense Manufacturing Board, an internal organization (modeled, perhaps, after the Defense Science Board).

Strategic Planning Task Force

Conclusion

The implicit strategy of the Department of Defense for addressing industrial base issues has been to conduct ad hoc studies of current problems. While individually important and useful, they have not been sufficient to resolve problems stemming from occasionally conflicting regulations, laws and directives, and inconsistent attention and resources dedicated to industrial base issues. The result has been insufficient resource allocations, confusion and lack of effectiveness in solving industrial base problems.

Discussion

A coherent, effective organization is required now to coordinate and provide oversight of ongoing industrial base initiatives and, more importantly, to do the necessary planning and organization work required to establish permanent institutional mechanisms.

Recommendation

The Department of Defense should ensure a viable industrial infrastructure is maintained to provide military materiel in the quantity and quality required during peacetime and for emergencies. Specifically, the Department should develop industrial strategic plans explicitly linked to military operational plans. The goal should be to identify and address actual and potential shortfalls systematically through mechanisms that sort out the relative urgency and importance of technological and industrial requirements against a backdrop of military planning scenarios and objectives. The Department should provide for a continuing assessment of both the short and long-term defense industrial base capabilities along with a clear ennunciation to industry of what is needed from the industrial base and when.

The Department of Defense should immediately establish a task force under the direction of the Under Secretary of Defense (Acquisition), staffed with specialists from the Office of the Secretary of Defense, the Military Departments, and the Organization of the

Joint Chiefs of Staff, to expedite implementation throughout the Department of these and other actions identified in the report. Among other things, the task force should:

1. Develop and staff a Departmental policy statement regarding defense industrial strategic planning in support of military operational plans.

2. Determine the organizational structure, staffing and budget necessary to institutionalize the defense industrial strategic planning function in support of military operational plans.

3. Establish senior level liaison with selected allies, American industry, and appropriate civil agencies such as the Departments of Treasury, State and Commerce.

Production Base Advocate

Conclusion

The system that has been erected over decades by both the Department of Defense and the Congress to obtain the materiel necessary for our security could be improved to accomplish more effectively the objectives of providing the military with appropriate technologies, within reasonable time periods, at reasonable cost, and of yielding outstanding quality products that can be produced in time and in the necessary quantities to satisfy potential emergencies.

Discussion

The laws and regulations under which Defense acquisition programs function are, by any measure, a *hodge–podge* which has evolved over several decades. A substantial portion of the entire body of rules was put in place in response to specific occurrences of poor management or wrong doing, and is intended solely to ensure that these occurrences *can never happen again*. Typically, such remedial actions initially were not evaluated for soundness and feasibility of implementation, nor have they been subsequently evaluated. There is a compelling need for institutional means, such as a Production Base Advocate, to test objectively the soundness and impact on industrial efficiency of existing and proposed laws and regulations, as well as the means to develop and test innovative alternatives to such laws and regulations.

Key characteristics of the office of Production Base Advocate should include:

- A small, but highly qualified staff, headed by the Department's Production Base Advocate. Other staff members would be drawn from the Military Departments and Defense Agencies, in the same manner as for other joint program offices;
- Annual budget authority to support tests of innovative manufacturing and industrial base programs;
- A board of advisors, with membership from industry, academia, and other Government organizations (the Manufacturing Advisory Council and/or the Defense Manufacturing Board could fulfill this function).

The Production Base Advocate should have broad authority to deviate from acquisition regulations (both legislative and administrative based) in the process of conducting experimental programs to improve Department of Defense management.

Recommendation

The Department of Defense should establish an office of Production Base Advocate, an institutional structure to receive, evaluate, and test innovative ideas for improvement of Department of Defense manufacturing programs.

Analytic Capability to Develop Defense Perspectives

Conclusion

The Department of Defense has not had adequate institutional mechanisms for maintaining awareness of either technology or industry trends, nor for understanding, analyzing, or assessing the national and international issues that surround the questions of American technological or industrial competitiveness.

Discussion

In order to guide defense policy more effectively, the Secretary of Defense and the Under Secretary of Defense (Acquisition) require coherent, dedicated data acquisition and analysis support not currently available to them. In developing this capability, the Department should recognize existing programs which might be adapted to address this shortfall. Two such programs, the Defense Industrial Network and Project SOCRATES, that are now in their formative stages, are being established to deal with specific problem areas in manufacturing and technology, but might economically be adapted to fill this need.

Recommendation

The Department of Defense should establish permanent, institutional mechanisms to acquire, analyze, and assess manufacturing and technology data and provide the principal officers of the Department cogent, objective advice with respect to defense issues that involve the performance of the United States industrial base. The Defense Industrial Network and the Defense Intelligence Agency's Project SOCRATES should be merged and adapted to fill this requirement for data.

Foreign Dependencies

Conclusion

From the national security perspective, foreign dependencies in technologies essential to defense production are inherently risky, and minimizing them should be a Department of Defense and national priority. However, there is at present no reliable system even to identify such dependencies, not to mention systems to minimize them. Especially in critical lower-tier industries which support defense prime contractors, visibility is key to maintaining the ability to assess the consequences of foreign-sourcing and evaluate the implications of the potential loss of leadership in key technologies.

Discussion

The Department of Defense does not know the extent to which foreign-sourced parts and components are incorporated in the systems it acquires. There is no systematic, established means to identify foreign-sourced parts and components and, hence, no way to determine the extent of foreign dependencies or vulnerabilities. There have been a number of *ad hoc* efforts that have identified specific foreign dependencies and preliminary indications that foreign dependencies are increasing. In a national emergency, the consequences of extensive dependence on foreign sources could be extreme.

More immediately, however, an apparent consequence is that we are experiencing the loss of technological leadership in key manufacturing technologies at an increasing rate. This has extremely adverse potential for our long-term security interests.

Recommendation

The Department of Defense should develop and implement systems to provide visibility of critical foreign-sourced items in or proposed to be in new weapon systems, prior to the demonstration/validation decision milestone during the acquisition decision making process.

Factory Modernization Investments

Conclusion

Defense acquisition programs are not conducted in a normal market environment, and the absence of normal market incentives is a barrier to contractor investment. In the absence of normal market incentives, the Department of Defense has developed alternative programs, primarily a rigid set of procurement rules and regulations. There are aspects of these Departmental procurement policies and regulations that impede investments for increased productivity. The Department's Industrial Modernization Incentives Program, designed to stimulate contractor investments, must be administered within this contrary environment and, therefore, is not as effective as it otherwise might be.

Discussion

Some Department of Defense policy–related impediments to investment have existed for many years. Among these are:

- Cost–based production contracts, which not only fail to reward contractors for reducing costs, but often actually penalize reduced costs by also reducing profits. In effect, the most efficient contractor earns the least profit and, conversely, the least efficient earns the most;
- Emphasis on low acquisition cost and schedule compliance, to the virtual exclusion of low life cycle costs and producibility and reliability considerations.

Others of more recent origin pose even greater threats to the long–term efficiency and productivity of the defense industrial base:

- Increased emphasis on price competition, which forces shortcuts and reduces incentives for investments in new equipment and quality systems;
- Intense pressure on profits — down to levels that virtually guarantee contractors will have limited ability to invest in future productivity programs or high–quality people;

- The absence of risk-sharing for innovation;
- Emphasis on forcing contractors to fund (and assume risk for) program-specific tooling and test equipment.

In the short-term, such policies and practices may result in reduced program acquisition costs, which is their intent, but in the long-term, they may be counterproductive if they accelerate the decline of the defense industrial base.

Recommendation

The Department of Defense should assign high priority to resolving the issues of incentives for productivity enhancing investments by defense contractors and to creating an environment more conducive to successful administration of the Industrial Modernization Incentives Program. This task will require detailed analysis of the effects of virtually every aspect of defense acquisition policy, much of which is mandated in law. This substantial undertaking may be an appropriate high priority task for the Production Base Advocate, assisted as required by the Manufacturing Advisory Council and the Defense Manufacturing Board.

Program Stability

Conclusion

There is little doubt that program and process instability and uncertainty are extremely detrimental to defense acquisition and manufacturing management. Much of the instability and uncertainty clearly is attributable to lengthy budget and program decision processes within the Executive Branch. Equally clear, much of it is attributable to congressional micromanagement, not just of defense programs, but of small details of the acquisition management process. It is unlikely that major improvements in defense acquisition and manufacturing management will be achieved in the absence of greater predictability, stability, and certainty in programs and the acquisition process.

Discussion

Both Congress and the Department of Defense contribute to an environment which is inimical to good manufacturing practices and cost containment, and which is a strong impediment to investment by defense contractors. Elements of the environment include constant budget turbulence, small-volume programs, year-to-year program uncertainties, program *stretch outs*, changes in the rules of contracting (competition, military requirements, allowable profits, audit standards, etc.), late appropriations, and uncertain congressional continuing resolutions. These great uncertainties by themselves are sufficient to motivate defense contractors not to invest in productivity improvements. They also serve as strong impediments to highly qualified commercial manufacturing firms entering the defense market; and in some cases, they have been primary causes of firms leaving the defense market.

Recommendation

The Department of Defense must support and make better and more extensive use of programs already available (or potentially available) to stabilize major acquisition programs. These include two-year budget cycles, multi-year contracts, and a more realistic (achievable) five-year program. There also must be incisive analyses of programmed and budgeted development and production rates specifically focused on the issues of manufacturing efficiency and cost, contractor incentives for investment, and long-term impact on industrial capacity and capability.

26-313 0 - 90 - 7

Life Cycle Costs

Conclusion

The most effective measure of the value of a weapon system is based not on its initial acquisition cost, but on the total costs over its entire fielded life. Effective, universal use of true life cycle costing techniques is an imperative if the Department of Defense is to acquire the most effective and reliable systems at affordable overall costs.

Discussion

The concept of life cycle costing provides the most sound basis for effective evaluation of proposed weapon system research and development and production programs. However, life cycle costing is not often used effectively in the evaluation and source selection processes. Program managers and source selection teams often focus overwhelmingly on up-front costs and schedule considerations in evaluating proposals. Budget pressures are an obvious cause of these priorities, but there are other, perhaps equally important, causes.

Department of Defense personnel are uncomfortable with the inherently uncertain down-stream costs implied in the issues of how reliable a system is and how easily it can be maintained and used, as they are reflected in contractors' projections of requirements for human resources and training, support equipment, spare parts, etc. Even after the fact, the Department has no adequate means to monitor and evaluate actual versus projected life cycle costs and, hence, has no means to gain added confidence in future evaluations of contractors' projections of life cycle costs. One consequence is that the Department of Defense rarely assigns any weight to contractors' reputations for producing reliable, high-quality, low-maintenance systems, because it has little ability to do so.

Recommendation

The Department of Defense should raise the priority of using life cycle costs as a basic evaluation technique in acquisition programs. An assessment should be made of the progress of the Department of Defense in applying this concept. More research should be conducted to achieve a better understanding of the concept and how it can be exploited for the Department's benefit. Specific procurement experiments should be conducted to explore how the use of life cycle costing can be developed to reduce overall costs of weapon systems.

Quality Control

Conclusion

Current Defense Department acquisition management systems and procedures do not adequately recognize the importance of effective quality control programs in contractors' plants nor do they provide sufficient incentives for contractors to invest in such programs.

Discussion

In other countries, most notably Japan, techniques and processes for achieving consistently high quality manufactured products have progressed much more rapidly and have been more widely adopted than in the United States. Within the United States industrial base, firms in the defense sector have lagged even further behind. To some extent, Department of Defense acquisition and management practices are causes of the reluctance of defense contractors to adopt advanced quality control programs. Department of Defense practices, which have been characterized as *inspecting quality in*, do not recognize or adequately reward contractors who achieve effective quality control and, hence, provide little incentive for them to do so.

Recommendation

The Department of Defense should develop an effective *quality first* program, and dedicate the resources required to implement such an effort. An effective program will require, among other things, basic changes in emphasis in source selection criteria and procedures and extensive training of Department of Defense personnel in modern quality control systems and processes.

Commercial Specifications and Processes

Conclusion

Department of Defense programs might benefit greatly from increased use of commercial specifications and, especially in the lower tiers, from increased use of the same resources (design, engineering, production facilities) to manufacture both military and commercial products. Potential benefits include reduced lead times, reduced costs, improved quality and reliability, and increased responsiveness to meet surge and mobilization requirements.

Discussion

The separation in the industrial base between defense and commercial production is nearly absolute. There are few examples of firms that produce both military and commercial products in the same plants. There are firms that serve both markets, but they invariably maintain rigid separation between the two lines of business. These firms, however, do have a more informed view of the difficulties involved in attempting to integrate production of military and commercial products. Their perceptions are that barriers to integration range from the immense burdens imposed on defense contractors by Government rules and regulations (including, for example, cost accounting standards which require defense contractors to keep two sets of books) to the unique requirements of thousands of detailed process and product specifications (which frequently are obsolete by the time they are promulgated). In many product and process technologies, commercial practice has surpassed defense practice, with the result that the Department of Defense often pays more for less advanced products.

Recommendation

The Department of Defense should vigorously pursue efforts to increase use of commercial manufacturing process and product specifications, in lieu of unique military specifications. The Department also should comprehensively identify barriers to integrated manufacturing of commercial and military products and examine alternative practices which might facilitate such integration.

Emphasis on Process Technology

Conclusion

American manufacturers, in many cases, are unable to get products from research and development into the market as fast as is necessary to be competitive. There are many examples where American manufacturers are unable to develop and apply new process technology in their operations as fast as their international competitors. In the defense sector, the Department of Defense Manufacturing Technology Program is the only existing program focused specifically on development of advanced manufacturing process technology.

Discussion

The Department of Defense Manufacturing Technology Program has contributed greatly to the advancement of generic manufacturing science and technology, but even more productive results could be achieved with greatly expanded and more predictable levels of resources. The Department of Defense also must find specific means to integrate concurrent product and process technology development into research and development programs and the acquisition life cycle. One way would be to require concurrent development of efficient, cost effective manufacturing capability as part of all research and development efforts. Among the measures that could be pursued is a contract clause tailored to each research and development effort to require development and demonstration of the ability to produce the product.

Recommendation

The Department of Defense should develop a comprehensive program to ensure development and application of effective, advanced process technologies concurrent with basic science and technology programs and weapon systems development programs. The program should have four major thrusts: (1) development of manufacturing technology as part of all basic science and technology programs; (2) development of manufacturing technology in all weapon systems development programs; (3) changes in policies governing contractor independent research and development/bid and proposal costs to stimulate emphasis on manufacturing technology and, (4) greatly expanded emphasis and resources for the Manufacturing Technology Program.

Technological Skill Base

Conclusion

The quality of the nation's technological skill base is an indicator of the future prospects for American industrial competitiveness. The source of the technical skill base is our university system. While the quality of the system is sound (and it remains a national competitive advantage when compared to the rest of the world), there are some areas of concern.

Discussion

Much of the discussion about technical education focuses on funding, but the issue is equally one of national leadership. The nation must build its technological skill base if it is to achieve the goals of security and well being of its citizens. Current data suggests that foreigners may be utilizing our graduate technical programs more than we are (85 percent of the recent growth in graduate education has been from foreign students often on state subsidy and/or Federal Government grants). Coupled with demographics that will reduce the pool of potential scientists and engineers, there is a growing problem that can be altered only by national leadership.

The effort should include all Federal agencies with technical missions, including the National Aeronautics and Space Administration, the Department of Energy, and the National Bureau of Standards of the Department of Commerce. National political and business leaders should be involved with a multi-media approach to achieve a national consensus for support. Industry should be stimulated to assist with the effort in local and regional programs, seminars, cooperative education efforts, and, particularly, with attractive technical career path opportunities.

Recommendation

The Department of Defense should lead the organization of a national program to stimulate enrollment in both undergraduate and graduate technical programs to assure both the quantity and quality of technically qualified graduates necessary for national success. A specific objective should be to raise the prestige and attractiveness of technical careers, with particular emphasis on manufacturing.

Incentives for Technical Education

Conclusion

The Department of Defense, perhaps more than any other agency, depends on technology as its lifeblood. The Department has a direct stake in the quantity and quality of science and engineering graduates. Efforts must be made to reverse the decline in numbers and capabilities of technically educated personnel.

Discussion

The Department of Defense might offer scholarships at schools willing to build world-class manufacturing engineering programs. Selection of the schools would be based upon:

- Industrial commitment to maintain leading edge university expertise;
- Industrially supported faculty positions to enable the world's best manufacturing managers to teach future generations;
- Industrial hiring programs to assure that the finest career opportunities are afforded the new generation manufacturing manager;
- State and university commitments for faculty and curriculum development to ensure America remains on the leading edge of the development and management of technological progress.

Recommendation

The Department of Defense should combine a scholarship program in manufacturing engineering with a plan to build university expertise in manufacturing. The program should be developed jointly with industry.

Educational Facilities

Conclusion

State-of-the-art education facilities represent another deficiency in American universities for teaching manufacturing-related science and engineering skills and, hence, provide another impediment for students and faculty alike to pursue manufacturing careers.

Discussion

An instrumented factory program might competitively award grants for a number of advanced manufacturing technology demonstration centers to universities or nonprofit coalitions of manufacturers, equipment suppliers, material suppliers, and other appropriate organizations. Each center would consist of an instrumented factory that produces limited quantities of military items, using the latest available state-of-the-art manufacturing technologies. The program would provide for conducting Government-funded research and development associated with the processes used in the factory, encompassing the physical, data, control, and human factors. Mechanisms would be required to ensure that the technologies are promptly implemented in private companies.

Recommendation

The Department of Defense could provide seed money for an instrumented factory program for industries where there are large numbers of companies and significant nondefense applications.

Production Base Impact Assessment

Conclusion

There is a need for focused, coherent analysis of issues affecting American manufacturing industries.

Discussion

United States law and policy historically have been developed primarily in response to domestic requirements, with little attention given to the possible harmful effects they may have on the health, vitality, and long-term survival of American manufacturing industries in an increasingly competitive international environment. Explicit assessments of the effects of legislation and regulation on the health and vitality of our production base should be conducted prior to their promulgation.

Recommendation

The Department of Defense recommends establishing a substantial analytic capability within the Legislative Branch dedicated exclusively to objective analysis of the impact of existing and proposed legislation on the United States manufacturing base and its ability to compete internationally.

Coherent Tax Policies

Conclusion

Direct, indirect, and hidden taxes on the United States manufacturing base are, by current world standards, not conducive to investing at the required levels to achieve and sustain world leadership in advanced technologies and manufacturing processes.

Discussion

Efforts to achieve equitable tax policies domestically have resulted in a substantial shifting of tax burdens from individuals to industry. Especially troublesome to many American manufacturing firms is the fact that the tax burden on industry is fully reflected in the costs of domestically manufactured products, but not in the costs of foreign-manufactured products sold in the American market, even though alternative tax structures to equalize the tax burden across all products are permitted under the General Agreement on Tariffs and Trade.

Recommendation

The Department of Defense advocates and supports the concept that there should be a comprehensive analysis of tax policies specifically focused on enhancing the international competitiveness of American manufacturing industries. The Department of Defense recommends that the President and the Congress jointly cause this comprehensive analysis to be undertaken as a national priority.

Coherent Trade and Domestic Policies

Conclusion

Many other elements of Federal law (antitrust, environment, safety, etc.), other than the tax code, also affect the operations and costs of manufacturing in the United States. In many cases, such laws are unique to the United States and, therefore, represent unique financial burdens on domestic manufacturers.

Discussion

Trade policies, as well as elements of domestic policies (antitrust, etc.) are significant determinants not only of the level of resources that are or can be devoted to defense, but of the productivity of the industries supporting our defense. From the perspective of security policy, the Department of Defense believes that in formulating trade policies, within the framework of international agreements, attention should be focused on the impact such policies have on American competitiveness and stimulating a productive manufacturing base. Domestic policies also should be examined from this perspective.

Recommendation

The Department of Defense advocates and supports the concept that there should be a comprehensive analysis of trade policy and domestic policies, specifically focused on enhancing the international competitiveness of American manufacturing industries. The Department of Defense recommends that the President cause such fundamental examinations to be undertaken as national priorities.

Education and Training

Conclusion

There is substantial evidence that the basic skill levels of many American high school graduates are not adequate for the needs of manufacturing firms. At the university level, curricula does not adequately focus on manufacturing processes, technologies, or management. Continuing education programs for professionals and workers alike are inadequate or nonexistent in most American firms.

Discussion

The Department of Defense is dependent upon a continuing flow of highly qualified mathematicians, scientists, engineers, and technicians, as well as an adequate supply of skilled, motivated line workers in manufacturing processes and maintenance programs. Shortages in these areas create market distortions, which disrupt development and production schedules, reduce quality, and increase costs. Education and training are the most fundamental long-term national priorities in the effort to sustain an advanced industrial economy and to provide adequately for our defense.

The Department of Defense traditionally has been and continues to be involved in scientific and technical educational programs, but has not recently subjected its educational programs to rigorous review from the perspective of modern industrial requirements. There also has been no recent fundamental examination of the quality or relevance of American educational systems (at all levels) specifically from the perspective of the needs of an advanced industrial economy. The combination of deficiencies in education and training at all levels represents, perhaps, the most serious long-term problem facing the United States industrial base.

Recommendation

The Department of Defense problem with respect to inadequate skill levels in the United States is a component part of the national problem. The Department recognizes that long-term basic solutions are beyond the scope of its responsibilities and capabilities and urges that there be a national effort, beginning now, to achieve these long-term solutions.

Private Sector Issues

Conclusion

Notwithstanding the continuing successes of some entire sectors of the United States manufacturing base and of individual firms in other sectors, there is a pervasive problem with the quality and effectiveness of management in American manufacturing industries.

Discussion

The findings of this study are, collectively, an indictment of management in American manufacturing firms. This is a particularly sensitive problem because Government has little or no ability to address the problem or to contribute to its solution. Of course, one exception is that Government should ensure that its current practices that are intrusions into the operations of manufacturing firms do in fact impose the least possible harm on these firms. However, this should not be construed to mean Government will shirk its oversight responsibilities. A less obvious exception lies in the potential for Government to influence the expectations and actions of owners and managers through, for example, changes to tax law to discourage an excessive focus on the short-term and to provide incentives for long-term investment in technology development and implementation.

Recommendation

The Department of Defense can contribute substantially to improved management in defense firms through improved acquisition processes, selective contract incentives based on competitive cost reductions, and a concommitant effort to reduce its intrusions into management's affairs. The management problem in non-defense industries, however, is largely beyond the reach of Government agencies. At a minimum, however, unnecessary Government barriers to management motivation to achieve manufacturing excellence and competitiveness must be identified and dismantled.

26-313 0 - 90 - 8

POST SCRIPT

by Dr. Robert B. Costello
Under Secretary of Defense (Acquisition)

The research that formed the basis for the recommendations contained in this report was conducted over more than a year's time. As good ideas came to the fore during this period, we chose to act upon them rather than await final publication of the report on this initiative. Some of the recommendations already are ongoing within the Department. For example, one key recommendation in this report, perhaps the highest priority, is directed to forging better relations with industry. Proper cooperation between industry and Government is essential for creating a *win–win* situation for both parties and for ensuring the existence of a healthy and vital industrial base from which the Department can draw its mission requirements.

To this end, the establishment of a Defense Manufacturing Board within the Department of Defense is underway. This new Board has an approved charter, and the nomination process for members has begun. The National Academy of Sciences has agreed informally to create a Defense Manufacturing Strategy Committee, referred to in the report as the Manufacturing Advisory Council. Nominees to this Committee also have been identified. The Defense Science Board has formed a Defense Industrial and Technology Base Task Force. This Task Force will examine in greater detail the recommendations we have made on bolstering defense industrial competitiveness. These beginning efforts should provide the foundation for a more effective partnership between the Department and the industries upon which we rely and for developing innovative solutions to both the short– and long–term problems identified in the report.

Two key actions required to ensure a comprehensive, sustained effort to implement these and other new initiatives are: (1) to provide a senior–level focal point to concentrate Departmental responsibilities for industrial base programs; and (2) to acquire the factual data required to support sound industrial base plans and programs.

Efforts are actively underway to establish the new position of Deputy Under Secretary of Defense (Production Base and International Technology), who was referred to in the report as the Department of Defense Production Base Advocate. Along with its institutional responsibilities to receive, evaluate, and test innovative ideas to improve Department of

Defense manufacturing programs, the Office of the Deputy Under Secretary of Defense (Production Base and International Technology) will serve as the focal point within the Office of the Secretary of Defense to oversee and coordinate all manufacturing-related activities of the Department.

The Office of the Deputy Under Secretary of Defense (Production Base and International Technology) also will be responsible for acquiring, organizing, maintaining, and disseminating data required for defense industrial base plans and programs. This effort already has begun with the staffing of a directive merging the Defense Industrial Network and Project SOCRATES into the Defense Industrial Base Information Administration. This effort will be broadened in the near future to develop means to identify critical foreign-sourced items in current and proposed weapon systems programs.

With these two key actions underway, the foundations are being laid for establishing the comprehensive, dedicated capabilities we require to manage effectively a great many discrete industrial base programs. Many of these already are underway and will continue, but they will be placed under the general cognizance of the Deputy Under Secretary of Defense (Production Base and International Technology) for oversight, policy guidance, and Department-level management.

Educational initiatives are, in the long-term, perhaps the most significant of the recommendations contained in the report. We intend to move resolutely, but cautiously, on these: resolutely because the issue of superior technical and scientific education is critical to the nation's future; cautiously because the Department of Defense properly is limited to a support role in this issue, which involves every level of Government.

A number of the remaining recommendations relate to efforts already in place within the Department or to recent new initiatives. This, of course, does not mean that we have solved all our problems. These are partial solutions to very complex problems that will continue to require our attention and the best ideas from industry, Government, and our allies.

For example, in order to help ensure that sectors critical to our security, such as the semiconductor and machine tool industries, become more internationally competitive in manufacturing technology, the Department has provided support for the establishment of a

Semiconductor Manufacturing Technology Consortium and a National Center For Manufacturing Science.

Our Total Quality Management effort is another example of a current effort underway within the Department that is in consonance with the findings of this study. We are working to broaden the focus of quality to change the present culture of the acquisition process, contractual requirements, design and manufacturing practices, and the modern concept of quality. We hope to provide the means to change the quality culture across the Department of Defense and industry by reducing weapon systems' costs while improving their quality in the field.

We are now in the process of forming a strategic planning task force, with membership from the Office of the Secretary of Defense, the Military Departments, the Organization of the Joint Chiefs of Staff, and the Defense Logistics Agency. The principal purpose of the task force will be to establish meaningful linkages between the materiel requirements of military operational plans and the industrial base and technology programs managed by the Deputy Under Secretary of Defense (Production Base and International Technology). A substantial portion of this task already has been accomplished and provides a solid foundation for the work of the task force. The Joint Industrial Mobilization Planning Process is the analytic and assessment process used by the Military Departments, Organization of the Joint Chiefs of Staff, and Defense Agencies to perform industrial capabilities analyses for the Joint Strategic Planning System and to link industrial mobilization plans to operational plans.

Substantial progress also has been made on the recommendations for: improving incentives for producibility enhancing investments; focusing the acquisition system on life cycle costs; increasing use of commercial product and process specifications; and greatly increasing our emphasis on the development of advanced manufacturing technology.

Contact also has been made with the Economic Policy Council in the Executive Office of the President in order to begin establishing a means of exploring further the national policy issues discussed in this report.

Many other efforts are being pursued within the Department of Defense. These, in conjunction with the new ideas emanating from this study, have formed the basis for implementing this action plan to bolster defense industrial competitiveness.

II

101ST CONGRESS
1ST SESSION

S. 1379

To reauthorize and amend the Defense Production Act of 1950, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 24 (legislative day, JANUARY 3), 1989

Mr. DIXON (for himself, Mr. HEINZ, Mr. SHELBY, Mr. WIRTH, and Mr. D'AMATO) introduced the following bill; which was read twice and referred to the Committee on Banking, Housing, and Urban Affairs

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A BILL

To reauthorize and amend the Defense Production Act of 1950, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Defense Production Act Amendments of 1989".

SEC. 2. CONGRESSIONAL FINDINGS.

The Congress finds that—

(1) the Defense Production Act of 1950 (50 U.S.C. App. 2061 et seq.) provides essential authority for—

(A) preserving and enhancing the defense industrial and technology base of the United States during peacetime; and

(B) mobilizing the Nation's productive capacity for national defense during periods of national emergency; and

(2) amendments to such Act are needed to—

(A) improve its utility to effectively sustain and develop the efficiency of the Nation's existing productive capacity necessary to meet national defense requirements;

(B) establish a revolving fund for improved management of the resources dedicated to defense industrial preparedness and the conduct of the programs authorized under the Act;

(C) facilitate use of such Act to foster the development of emerging technologies and advanced processes by providing appropriate protections for joint undertakings in research, development, production, and marketing; and

(D) eliminate outdated provisions that detract from the Act's usefulness as a primary set of authorities for the maintenance and enhancement of the defense industrial and technology base of the United States.

SEC. 3. TABLE OF CONTENTS.

TITLE I—AMENDMENTS TO THE DEFENSE PRODUCTION ACT OF 1950

PART A—DECLARATION OF POLICY

Sec. 101. Declaration of policy.

PART B—AMENDMENTS TO TITLE III OF THE DEFENSE PRODUCTION ACT

Sec. 111. Expanding the reach of existing authorities under title III.
Sec. 112. Sales or transfers of excess industrial resources.
Sec. 113. Defense Production Act fund.
Sec. 114. Annual report on impact of offsets.

PART C—AMENDMENTS TO TITLE VII OF THE DEFENSE PRODUCTION ACT

Sec. 121. Small business.
Sec. 122. Definitions.
Sec. 123. Delegation of authority; appointment of personnel.
Sec. 124. Rules, regulations, and orders.
Sec. 125. Antitrust protections for sanctioned industry consortia.
Sec. 126. Exemption from Administrative Procedure Act.
Sec. 127. Authority to review certain mergers, acquisitions, and takeovers.

PART D—TECHNICAL AMENDMENTS

Sec. 131. Priorities in contracts and orders.
Sec. 132. Loan guarantees.
Sec. 133. Investigations; records; reports; subpoenas.
Sec. 134. Employment of personnel.
Sec. 135. Authorization of appropriations.

PART E—REPEALERS AND CONFORMING AMENDMENTS

Sec. 141. Synthetic fuel action.
Sec. 142. Voluntary agreements and plans of action for international agreements for international allocation of petroleum products and related information systems.
Sec. 143. Authorization of appropriations.
Sec. 144. Joint committee on defense production.
Sec. 145. Small defense plants administration.
Sec. 146. Persons disqualified for employment.
Sec. 147. Feasibility study on uniform cost accounting standards; report submitted.
Sec. 148. National commission on supplies and shortages.

PART F—REAUTHORIZATION OF SELECTED PROVISIONS

Sec. 151. Authorization of appropriations.
Sec. 152. Termination of authorities.

TITLE II—ADDITIONAL PROVISIONS TO IMPROVE INDUSTRIAL PREPAREDNESS

PART A—INDUSTRIAL CAPABILITY AND NATIONAL SECURITY

Sec. 201. Industrial capabilities committee.
Sec. 202. Integration of national security policy and national economic policy.
Sec. 203. Assessing industrial responsiveness capabilities.

PART B—ENCOURAGING IMPROVEMENT OF THE DEFENSE INDUSTRIAL BASE

Sec. 211. Encouragement of investment in advanced manufacturing technology and processes.
Sec. 212. Recognition of modernized production systems and equipment in contract award and administration.
Sec. 213. Support for the development and application of critical technologies.
Sec. 214. Procurement of critical items of supply.

PART C—UNFAIR FOREIGN COMPETITION

Sec. 221. Evaluation of offers from sources other than domestic sources.
Sec. 222. Discouraging unfair trade practices.

TITLE III—AMENDMENTS TO RELATED LAWS

Sec. 301. Proceeds from sale of excess industrial plant equipment and facilities.
Sec. 302. Stockpiling of critical components.

TITLE IV—EFFECTIVE DATES

Sec. 401. Effective dates.

TITLE I—AMENDMENTS TO THE DEFENSE PRODUCTION ACT OF 1950

PART A—DECLARATION OF POLICY

SEC. 101. DECLARATION OF POLICY.

Section 2 of the Defense Production Act of 1950 (50 U.S.C. App. 2062) is amended to read as follows:

"SEC. 2. DECLARATION OF POLICY.

The vitality of the industrial and technology base of the United States is a foundation of national security. It provides the industrial and technological capabilities employed to meet national defense requirements, in peacetime and in time of national emergency. In peacetime, the health of the industrial and technology base contributes to the technological superi-

ority of our defense equipment, which is a cornerstone of our national defense strategy, and the efficiency with which defense equipment is developed and produced. In times of crisis, a healthy industrial base will be able to effectively provide the graduated response needed to effectively meet the demands of the emergency.

To meet these requirements, the Act affords to the President an array of authorities to shape defense preparedness programs and to take appropriate steps to maintain and enhance the defense industrial and technology base.

PART B—AMENDMENTS TO TITLE III OF THE DEFENSE PRODUCTION ACT

SEC. 111. EXPANDING THE REACH OF EXISTING AUTHORITIES UNDER TITLE III.

(a) GUARANTEE AUTHORITY.—Section 301 of the Defense Production Act of 1950 (50 U.S.C. App. 2091) is amended—

(1) in subsection (a)(1), by striking "to expedite production and deliveries or services under Government contracts for the procurement of materials or the performance of services for the national defense" and inserting "to expedite or expand production and deliveries or services under Government contracts for the procurement of industrial resources or a critical technology for the national defense";

(2) by amending subsection (a)(3)(A) to read:

"(A) the guaranteed contract or operation is for industrial resources or a critical technology which is essential to the national defense;";

(3) in subsection (a)(3)(B), by striking "the capability for the needed material or service" and inserting "the needed industrial resources or critical technology";

(4) in subsection (e)(1)(A), by striking "Except during periods of national emergency declared by the Congress or the President" and inserting "Except as provided in subparagraph (D)";

(5) in subsection (e)(1)(C), by striking "$25,000,000" and inserting "$50,000,000"; and

(6) by adding at the end of subsection (e)(1), the following new subparagraph:

"(D) The requirements of subparagraphs (A), (B), and (C) may be waived during periods of national emergency declared by Congress or the President or upon a determination made by the President, on a nondelegable basis, that a specific guarantee must be promptly made to avert an industrial resource or critical technology shortfall that would severely impair national defense capability.".

(b) LOANS TO PRIVATE BUSINESS ENTERPRISES.—Section 302 of the Defense Production Act of 1950 (50 U.S.C. App. 2092) is amended—

(1) in subsection (a), by striking "for the procurement of materials or the performance of services for the national defense" and inserting "for the procurement of industrial resources or a critical technology for the national defense";

(2) in subsection (c)(1), by striking "No such loans may be made under this section, except during periods of national emergency declared by the Congress or the President" and inserting "Except as provided in paragraph (4), no loans may be made under this section";

(3) in subsection (c)(3), by striking "$25,000,000" and inserting "$50,000,000"; and

(4) in subsection (c), by adding at the end the following new paragraph:

"(4) The requirements of paragraphs (1), (2), and (3) of this subsection may be waived during periods of national emergency declared by Congress or the President, or upon a determination made by the President, on a nondelegable basis, that a specific guarantee must be promptly made to avert an industrial resource or a critical technology shortfall that would severely impair national defense capability.".

(c) PURCHASES AND PURCHASE COMMITMENTS.—

(1) Section 303 of the Defense Production Act of 1950 (50 U.S.C. App. 2093(a)) is amended to read as follows:

"(a)(1) To assist in carrying out the objectives of this Act, the President may make provision (A) for purchases of or commitments to purchase an industrial resource or a critical technology, for Government use or resale; and (B) for the encouragement of exploration, development, and mining of critical and strategic materials, and other materials. Purchases for resale under this subsection shall not include that part of the supply of an agricultural commodity which is domestically produced except insofar as such domestically produced supply may be purchased for resale for industrial use or stockpiling, and no commodity purchased under this subsection shall be sold at less than the established ceiling price for such commodity (except that minerals, metals, and materials shall not be sold at less than the established ceiling price, or the current domestic market price, whichever is lower), or, if no ceiling price has been established, the higher of the following: (i) The current domestic market price for such commodity, or (ii) the minimum sale price established for agricultural commodities owned or controlled by the Commodity Credit Corporation as provided in section 407 of Public Law 430, 81st Congress. No purchase or commitment

to purchase any imported agricultural commodity shall specify a delivery date which is more than one year after the expiration of this section.

"(2) Except as provided in paragraph (4), the President may not execute a contract under this subsection unless the President determines that—

"(A) the industrial resource or critical technology is essential to the national defense;

"(B) without Presidential action under authority of this section, United States industry cannot reasonably be expected to provide the capability for the needed industrial resource or critical technology in a timely manner;

"(C) purchases, purchase commitments, or other action pursuant to this section are the most cost-effective, expedient, and practical alternative method for meeting the need; and

"(D) the United States national defense demand for the industrial resource or critical technology is equal to, or greater than the output of domestic industrial capability which the President reasonably determines to be available for national defense, including the output to be established through the purchase, purchase commitment, or other action.

"(3) Except as provided in paragraph (4), the President shall take no action under this section unless the industrial resource shortfall which such action is intended to correct has been identified in the Budget of the United States or amendments thereto, submitted to the Congress and accompanied by a statement from the President demonstrating that the budget submission is in accordance with the provisions of the preceding sentence. Any such action may be taken only after 60 days have elapsed after such industrial resource shortfall has been identified pursuant to the preceding sentence. If the taking of any action or actions under this section to correct an industrial resource shortfall would cause the aggregate outstanding amount of all such actions for such industrial resource shortfall to exceed $50,000,000, any such action or actions may be taken only if specifically authorized by law.

"(4) The requirements of paragraphs (1), (2), and (3) may be waived during periods of national emergency declared by Congress or the President, or upon a determination made by the President, on a nondelegable basis, that a specific purchase or purchase commitment must be promptly made to avert an industrial resource or a critical technology shortfall that would severely impair national defense capability."; and

(2) Section 303(b) of such Act is amended by striking "September 30, 1995" and inserting "a date that is not more than 10 years from the date such pur-

chase, purchase commitment, or sale was initially made".

SEC. 112. SALES OR TRANSFERS OF EXCESS INDUSTRIAL RESOURCES.

Section 303(f) of the Defense Production Act of 1950 (50 U.S.C. App. 2093(f)) is amended to read as follows:

"(f) Industrial resources acquired pursuant to the provisions of this section which, in the judgment of the President, are in excess of the needs of programs under this Act, shall be sold for industrial use pursuant to other Government programs or transferred to the National Defense Stockpile established by the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98 et seq.), when the President deems such action to be in the public interest. Sales or transfers made pursuant to this subsection shall be charged against or reimbursed from funds appropriated to such other Government programs or the National Defense Stockpile to which such resources were sold or transferred, at the current domestic market price for such industrial resources. For the purposes of subsection (c)(2), such sales or transfers shall be considered transactions entered into pursuant to the authority of subsection (a).".

SEC. 113. DEFENSE PRODUCTION ACT FUND.

(a) IN GENERAL.—Section 304 of the Defense Production Act of 1950 (50 U.S.C. App. 2094) is amended to read as follows:

"SEC. 304. DEFENSE PRODUCTION ACT FUND.

"(a) ESTABLISHMENT OF FUND.—There is established in the Treasury of the United States a separate fund to be known as the Defense Production Act Fund (hereinafter referred to as 'the Fund').

"(b) MONEYS IN FUND.—The following monies shall be credited to the Fund:

"(1) All monies appropriated hereafter for the Fund.

"(2) All monies received hereafter on transactions entered into pursuant to section 303.

"(3) All monies received hereafter under transfers made from the National Defense Stockpile Transaction Fund, pursuant to section 98h(c) of title 50, United States Code.

"(4) All monies received hereafter pursuant to section 204(h) of the Federal Property and Administrative Services Act of 1949 from the disposition of industrial plant equipment and production facilities no longer required for industrial base mobilization purposes.

"(c) USE OF FUND.—The Fund shall be available to carry out the provisions and purposes of title III, subject to

the limitations set forth in this Act and in appropriations Acts.

"(d) DURATION OF FUND.—Monies in the Fund shall remain available until expended.

"(e) FUND BALANCE.—The Fund balance at the close of each fiscal year shall not exceed $250,000,000, excluding any monies appropriated to the Fund during that fiscal year. If at the close of any fiscal year the Fund balance exceeds such amount, the amount in excess of $250,000,000, excluding obligated funds appropriated to the Fund during that fiscal year, shall be paid into the general fund of the Treasury.

"(f) FUND MANAGER.—The Secretary of the Treasury shall designate a Fund manager. The duties of the Fund manager shall include—

"(1) determining the liability of the Fund in accordance with subsection (g);

"(2) certifying that the limitation contained in section 711(a)(4)(B) will not be exceeded by the additional obligation required by any agreement proposed under title III and providing authorization to enter into such agreement if such limitation is not exceeded; and

"(3) reporting to Congress each year regarding fund activities during the previous fiscal year.

"(g) LIABILITIES AGAINST FUND.—

"(1) IN GENERAL.—When any agreement hereafter entered into pursuant to title III imposes contingent liabilities upon the United States, such liability shall be considered an obligation against moneys in the Fund. The amount of such obligation shall be determined for each fiscal year in accordance with paragraph (2).

"(2) DETERMINATION OF LIABILITY.—For purposes of paragraph (1), the amount of obligations against the Fund shall be the greater of—

"(A) the aggregate outlays required by purchase or purchase commitment contracts, or financing agreements less the anticipated aggregate receipts from resale of materials purchased with moneys from the Fund and the anticipated receipts from the direct sale of materials by the producer to customers; or

"(B) one-third of the aggregate outlays required by purchase or purchase commitment contracts or financing agreements.

Anticipated receipts and anticipated reductions in purchase commitments shall be included under subparagraphs (A) and (B) only if a written plan for sale of materials has been developed, specifying probable customers, amount, time of the sales, and sales price.".

(b) CONFORMING AMENDMENTS.—Section 9 of the Strategic and Critical Materials Stock Piling Act (50 U.S.C. 98h) is amended—

(1) in subsection (b)(2), by adding after subparagraph (E), the following new subparagraph:

"(F) Transfer to the Defense Production Act Fund established pursuant to section 304(a) of the Defense Production Act of 1950."; and

(2) by amending subsection (c) to read as follows:

"(c)(1) Except as provided in paragraph (2), all moneys received from the sale of materials being rotated under the provisions of section 6(a)(4) or disposed of under section 7 shall be covered into the Fund and shall be available only for the acquisition of replacement materials.

"(2) Moneys derived from sales of materials to the public pursuant to section 6(a)(5) shall continue to be transferred to the Defense Production Act Fund established pursuant to section 304(a) of the Defense Production Act of 1950, until the aggregate amount of such transfers equals $10,000,000 for any fiscal year.".

(c) CAPITALIZATION OF FUND.—There shall be transferred to the Defense Production Act Fund, established by subsection (a) of this section, the sum of $200,000,000 from the unobligated balance of the National Defense Stockpile Transaction Fund (50 U.S.C. 98h).

SEC. 114. ANNUAL REPORT ON IMPACT OF OFFSETS.

Section 309 of the Defense Production Act of 1950 (50 U.S.C. 2099) is amended—

(1) in subsection (a)—

(A) by striking "Not later" and inserting "(1) Not later";

(B) by striking the second sentence; and

(C) by adding at the end the following new paragraph:

"(2) The Department of Commerce shall—

"(A) prepare the report required by paragraph (1);

"(B) consult with the Secretary of Defense, the Secretary of the Treasury, the Secretary of State, and the United States Trade Representative in preparation of such report; and

"(C) function as the President's Executive Agent for carrying out the requirements of this section.";

(2) by amending subsection (b) to read as follows:

"(b) INTERAGENCY STUDIES AND RELATED DATA.—

"(1) Each report required under subsection (a) shall be based on appropriate interagency studies which identify the cumulative effects (indirect as well as direct) of offset agreements on—

"(A) the full range of domestic defense productive capability (with special attention to the firms serving as lower-tier subcontractors or suppliers); and

"(B) the domestic defense technology base as a consequence of the technology transfers associated with such offset agreements.

"(2) Data developed or compiled by any agency while conducting such interagency study or other independent study or analysis shall be made available to the Secretary of Commerce to facilitate the Secretary in executing his responsibilities with respect to trade offset and countertrade policy development.";

(3) by adding at the end the following new subsections:

"(c) NOTICE OF OFFSET AGREEMENTS.—(1) If a United States firm enters into a contract for the sale of a weapon system or defense-related item to a foreign country or foreign firm and such contract is subject to an offset agreement exceeding $5,000,000 in value, such firm shall furnish an offset agreement to the official designated in the regulations promulgated to paragraph (2) information concerning such sale.

"(2) The information to be furnished shall be prescribed in regulations promulgated by the Secretary of Commerce.

Such regulations shall provide protection from public disclosure for information which is reasonably designated as proprietary or business confidential by the firm submitting such information, unless public disclosure is subsequently specifically authorized by such firm.

"(d) CONTENTS OF REPORT.—

"(1) IN GENERAL.—Each report under subsection (a) shall include—

"(A) a net assessment of the elements of the industrial base and technology base covered by the report;

"(B) recommendations for appropriate remedial action under the authorities provided by this Act, or other law or regulations;

"(C) a summary of the findings and recommendations of any interagency studies conducted during the reporting period under subsection (c);

"(D) a summary of offset arrangements concluded during the reporting period for which information has been furnished pursuant to subsection (c); and

"(E) a summary and analysis of any bilateral and multilateral negotiations relating to use of offsets completed during the reporting period.

"(2) ALTERNATIVE FINDINGS.—Each report may include any alternative findings or recommendations offered by any departmental Secretary, agency head, or the United States Trade Representative to the Secretary of Commerce. Such alternative finding or recommendation may be included if the Secretary of Commerce has been furnished the independent study or analysis upon which such alternative finding or recommendation is based during the preparation of the report.

"(e) UTILIZATION OF ANNUAL REPORT IN NEGOTIATIONS.—The findings and recommendations of the reports required by subsection (a), and the various interagency reports and analyses providing the basis for such reports shall be considered by representatives of the United States during bilateral and multilateral negotiations to minimize the adverse effects of offsets.".

PART C—AMENDMENTS TO TITLE VII OF THE DEFENSE PRODUCTION ACT

SEC. 121. SMALL BUSINESS.

Section 701 of the Defense Production Act of 1950 (50 U.S.C. App. 2151) is amended to read as follows:

"SEC. 701. SMALL BUSINESS.

"(a) PARTICIPATION.—Small business concerns shall be given the maximum practicable opportunity to participate

as contractors, and subcontractors at various tiers, in all programs to maintain and strengthen the Nation's industrial base and technology base undertaken pursuant to this Act.

"(b) ADMINISTRATION OF ACT.—In administering the programs, implementing regulations, policies, and procedures under this Act, requests, applications, or appeals from small business concerns shall, to the maximum extent practicable, be expeditiously handled.

"(c) ALLOCATIONS UNDER SECTION 101.—Whenever the President invokes the power to allocate any material pursuant to section 101 of this Act, small business concerns shall be accorded, so far as practicable, a fair share of such material, in proportion to the share received by such business concerns under normal conditions, giving such special consideration as may be possible to new small business concerns or individual firms facing undue hardship.".

SEC. 122. DEFINITIONS.

Section 702 of the Defense Production Act of 1950 (50 U.S.C. App. 2152) is amended to read as follows:

"SEC. 702. DEFINITIONS.—As used in this Act—

"(1) CRITICAL COMPONENT.—The term 'critical component' shall include components, subsystems, systems, and related special tooling and test equipment essential to the production, repair, maintenance, or operation of weapon systems or other military equipment

assigned a priority designation by the Secretary of Defense.

"(2) CRITICAL TECHNOLOGY.—The term 'critical technology' shall include a technology that is included in one or more of the plans submitted pursuant to section 2368 of title 10, United States Code, unless subsequently deleted, or such other emerging or dual use technology as may be designated by the President. A list of critical or emerging technologies shall be maintained and periodically published in the Federal Register and printed in the Code of Federal Regulations.

"(3) DEFENSE CONTRACTOR.—The term 'defense contractor' means any person who enters into a contract with the United States to furnish materials, industrial resources, or a critical technology, or to perform services for the national defense.

"(4) DOMESTIC SOURCE.—The term 'domestic source' means a business entity that performs substantially all of the research and development, engineering, manufacturing, and production activities required of such firm as a defense contractor in the United States or Canada.

"(5) FACILITIES.—The term 'facilities' shall include all types of buildings, structures, or other improvements to real property (but excluding farms,

churches or other places of worship, and private dwelling houses), and services relating to the use thereof.

"(6) INDUSTRIAL RESOURCES.—The term 'industrial resources' means materials, services, processes, or manufacturing equipment (including the processes, technologies, and ancillary services for the use of such equipment) needed to establish or maintain an efficient and modern national defense industrial capacity.

"(7) MATERIALS.—The term 'materials' shall include raw materials (including minerals, metals, and advanced processed materials), commodities, articles, components (including critical components), products, items of supply, and such technical information or services ancillary to the use thereof.

"(8) NATIONAL DEFENSE.—The term 'national defense' means programs for military and energy production or construction, military assistance to any foreign nation, stockpiling, space, and directly related activity.

"(9) NONDOMESTIC SOURCE.—The term 'nondomestic source' means a business entity other than a 'domestic source'.

"(10) PERSON.—The term 'person' includes an individual, corporation, partnership, association, or any

other organized group of persons, or legal successor or representative thereof.

"(11) SERVICES.—The term 'services' includes any effort that is needed or incidental to—

"(A) the development, production, processing, distribution, delivery, or use of an industrial resource or a critical technology, or

"(B) the construction of facilities.".

SEC. 123. DELEGATION OF AUTHORITY; APPOINTMENT OF PERSONNEL.

Section 703 of the Defense Production Act of 1950 (50 U.S.C. App. 2153) is amended to read as follows:

"SEC. 703. DELEGATION AND CIVILIAN PERSONNEL.

"(a) DELEGATION OF AUTHORITY.—Except as otherwise specifically provided, the President may—

"(1) delegate any power or authority conferred upon him by this Act to any officer or agency of the Government;

"(2) authorize such redelegation by that officer or agency head as the President may deem appropriate; and

"(3) establish such new agencies as may be necessary to manage Federal emergency preparedness programs.

"(b) CIVILIAN PERSONNEL.—Any officer or agency head may appoint civilian personnel without regard to section 531(b) of title 5, United States Code, and without regard to the provisions of such title governing appointments in the competitive service, and may fix the rate of basic pay for such personnel without regard to the provisions of chapter 51 and subchapter III of chapter 53 of such title relating to classification and General Schedule pay rates, except that no individual so appointed may receive pay in excess of the annual rate of basic pay payable for GS–18 of the General Schedule, as the President deems appropriate to carry out the provisions of this Act.".

SEC. 124. RULES, REGULATIONS, AND ORDERS.

Section 704 of the Defense Production Act of 1950 (50 U.S.C. App. 2154) is amended to read as follows:

"SEC. 704. RULES, REGULATIONS, AND ORDERS.

"The President may make such rules, regulations, and orders as he deems appropriate to carry out the provisions of this Act. This authority shall be exercised in conformity with section 709 of this Act.".

SEC. 125. ANTITRUST PROTECTIONS FOR SANCTIONED INDUSTRY CONSORTIA.

Section 708 of the Defense Production Act of 1950 (50 U.S.C. App. 2158) is amended to read as follows:

"SEC. 708. SANCTIONED INDUSTRY CONSORTIA.

"(a) ANTITRUST PROTECTION.—The President may authorize the establishment of sanctioned industry consortia, in accordance with subsection (e), to provide industrial resources or critical technologies found to be essential for the preservation or enhancement of the industrial or technology base of the United States supporting the national defense. Except as provided in subsection (j) of this section, no criminal or civil action may be brought under the antitrust laws against any participant in a sanctioned industry consortium for activities conducted in establishing such a consortium or in undertaking a plan of action within the scope of the charter of the sanctioned consortium.

"(b) DEFINITIONS.—As used in this section—

"(1) The term 'antitrust laws' means—

"(A) the Act entitled 'An Act to protect trade and commerce against unlawful restraints and monopolies and for other purposes', approved July 2, 1890, commonly referred to as the 'Sherman Act' (15 U.S.C. 1 et seq.);

"(B) the Act entitled 'An Act to supplement existing laws against unlawful restraints and monopolies and for other purposes', approved October 15, 1914, commonly referred to as the 'Clayton Act' (15 U.S.C. 12 et seq.);

"(C) the Federal Trade Commission Act (15 U.S.C. 41 et seq.);

"(D) sections 73 and 74 of the Act entitled 'An Act to reduce taxation, to provide revenue for the Government, and for other purposes', approved August 27, 1894, commonly referred to as the 'Wilson Tariff Act' (15 U.S.C. 8 and 9);

"(E) the Act of June 19, 1936, chapter 592 (15 U.S.C. 13, 13a, 13b, and 21a);

"(F) the Act entitled 'An Act to promote export trade and for other purposes', approved April 10, 1918, commonly referred to as the 'Webb-Pomerene Act' (15 U.S.C. 61–65); and

"(G) similar laws enacted by the several States.

"(2) The term 'flexible manufacturing network' means a specified program relating to the joint development, engineering, production, and marketing of one or more products by the network's participants for their common benefit, including—

"(A) the coordination of the individual engineering, purchasing, manufacturing, quality assurance, inventory control, and other activities by the participants to attain the network's specified program objectives, or the joint undertaking of such

activities by two or more of the network's participants;

"(B) the collection and sharing of information among the network's participants relating to manufacturing capacity, production costs, distribution capabilities, and potential markets for the specified products being produced by such network; and

"(C) the collection and sharing of such other technical or business information as may be reasonably required to undertake the network's specified program.

"(3) The term 'plan of action' means any of one or more documented methods adopted by participants in a sanctioned industry consortium (or voluntary agreement) to implement the purposes and objectives of such consortium or agreement.

"(4) The term 'sanctioned industry consortium' means an arrangement among two or more entities for the purpose of jointly undertaking a specific program of basic research, research and development, production, marketing, any specified combination of the foregoing activities, or a flexible manufacturing network relating to industrial resources or critical technologies found to be essential to the preservation or enhancement of the

industrial or technology base of the United States supporting the national defense. Such participating entities may include for-profit business concerns, not-for-profit entities, and educational institutions. The term also includes a voluntary agreement described in paragraph (5).

"(5) The term 'voluntary agreement' means an agreement approved by the President, which—

"(A) results from consultation by the President with representatives of industry, business, financing, agriculture, labor, and other interests,

"(B) is to provide for defense of the United States through the development of preparedness programs and the expansion of productive capacity and supply, and

"(C) is a result of a finding by the President that conditions exist which pose a direct threat to national security and preparedness programs.

"(c) DELEGATION OF PRESIDENTIAL AUTHORITY.—The authority granted to the President in this section may be delegated to one or more individuals whose appointments shall be subject to the advice and consent of the Senate.

"(d) FORMATION OF SANCTIONED INDUSTRY CONSORTIUM.—(1) Persons in the private sector interested in forming a sanctioned industry consortium may make application in

a form and containing such information as required by regulations promulgated pursuant to subsection (h).

"(2) Promptly after an application is received, a notice shall be published in the Federal Register announcing that an application for the establishment of a sanctioned industry consortium has been submitted, identifying each participating entity, and describing the activities to be undertaken by such consortium.

"(3) Not later than 7 days after an application has been submitted, a copy of the application shall be transmitted to the Attorney General and the Chairman of the Federal Trade Commission, accompanied by any supporting information submitted with the application, and any other information necessary to make a determination as to whether the proposed consortium should be sanctioned and established.

"(e) CRITERIA FOR SANCTIONING CONSORTIUM.—(1) A proposed industry consortium shall be sanctioned if it is determined that such industry consortium—

"(A) will provide at least one domestic source for industrial resources or critical technologies that will substantially enhance the capability of the industrial and technology base to support national defense requirements,

"(B) includes participants that are reasonably representative of the overall industry,

"(C) will not constitute unfair competition or a substantial restraint of trade with respect to other persons within the United States who may be sources of the same industrial resources or critical technology, and

"(D) will not unreasonably enhance, stabilize, or depress prices for the industrial resources or critical technologies that are the subject matter of such consortium's proposed activities.

"(2) Such application for the establishment of a sanctioned industry consortium shall be reviewed by the Attorney General, the Chairman of the Federal Trade Commission, and such other officers of the Executive as may be designated by the President in accordance with the requirements of paragraph (1) and such other evaluation criteria as may be specified in the regulations promulgated pursuant to subsection (h).

"(3) Not later than 90 days after the receipt of an application and not earlier than 30 days after the publication of the notice required by subsection (d)(2), such application shall be approved or disapproved. The reasons for disapproval shall be specified in writing.

"(4) Approval of an application shall be evidenced by the issuance of a charter which shall specify any special terms, conditions, or limitations which are deemed necessary

by the President, the Attorney General, or the Chairman of the Federal Trade Commission to assure compliance with the standards of paragraph (1) or such additional requirements as may be specified in the regulations promulgated pursuant to subsection (h).

"(5) Upon approval of a sanctioned industry consortium a Government employee shall be assigned as a principal liaison to such consortium pursuant to the regulations described in subsection (h).

"(f) CONSORTIUM ADVISORY COUNCIL.—A sanctioned industry consortium is authorized to organize an advisory council, specifying the membership, functions, and operating procedures of such council in its application.

"(g) CHARTER.—(1) MODIFICATION.—The charter of a sanctioned industry consortium may be modified during its term. A request for a modification initiated by the consortium shall be considered and approved in the same manner as an original charter application. A charter modification, directed by the President, shall be implemented within 30 days of the receipt of a notice of such a Presidential direction (unless extended by the President), or the consortium shall lose its protections under subsection (a).

"(2) TERMINATION.—A sanctioned industry consortium may be terminated by the President upon a finding that the industry consortium is no longer conducting its activities in

conformity with this section, the regulations promulgated pursuant to subsection (h), or the terms of the consortium's charter. Such notice shall specify the reasons for the determination to terminate the consortium, and afford the consortium at least 30 days to respond, in accordance with appeal procedures specified in the regulations promulgated pursuant to subsection (h).

"(h) REGULATIONS.—(1) The President shall promulgate regulations to implement this section. The preparation of such regulations, and modifications thereto, shall include the participation of the Attorney General, the Chairman of the Federal Trade Commission, and such other officers of the Executive as the President may deem appropriate.

"(2) In addition to regulations required by this section and such matters as the President deems appropriate for the effective administration of the program, the regulations required by paragraph (1) shall address the following matters:

"(A) In order to be accorded protections under subsection (a), affected persons shall furnish to the Attorney General and the Chairman of the Federal Trade Commission—

"(i) notice at least 10 days prior to initiating discussions among the prospective participants,

"(ii) notice of and the opportunity for representatives of the Attorney General and the Chair-

man of the Federal Trade Commission to participate in all meetings, and

"(iii) a transcript of the proceedings of each such meeting.

"(B) Opportunity shall be provided for designated Government representatives to attend any meeting sponsored by such consortium.

"(C) Opportunity for public participation in such consortium meetings shall be provided, unless the matters to be discussed at such meetings fall within a category described in paragraphs (1), (3), or (4) of section 552(b) of title 5, United States Code.

"(D) Access shall be provided for inspecting and copying, at reasonable times and upon reasonable notice, the records of the sanctioned industry consortium by representatives of the Attorney General, the Chairman of the Federal Trade Commission, and the individual designated as the Government's principal liaison to such sanctioned industry consortium.

"(E) Public access shall be provided to the Government's records relating to the establishment or conduct of a sanctioned industry consortium, subject to the limitations of paragraphs (1), (3), and (4) of section 552(b) of title 5, United States Code.

"(i) EXEMPTION FROM FEDERAL ADVISORY COMMITTEE ACT.—The activities of a sanctioned industry consortium (including any advisory council established by such consortium) are exempt from the provisions of the Federal Advisory Committee Act (5 U.S.C. App.), and the regulations promulgated thereunder, if such activities are conducted in compliance with this section, the regulations promulgated pursuant to subsection (h), and the terms of the consortium's charter.

"(j) REMEDIES.—(1) Any person who has been injured with respect to any act or omission committed in connection with the organization or operation of a sanctioned industry consortium may bring a civil action for injunctive relief or for breach of contract if—

"(A) such act or omission occurred—

"(i) in the course of organizing a sanctioned industry consortium pursuant to subsection (d), or

"(ii) while undertaking the sanctioned activities of the consortium pursuant to its charter, and

"(B) the person committing such act or omission failed to comply with the scope and limitations of its charter, the requirements of this section, or the regulations promulgated pursuant to subsection (h).

"(2) A person injured as a result of an act or omission described in paragraph (1) may be awarded—

"(A) actual damages, including interest on such damages, and

"(B) in the case of any successful action to enforce liability under this section, the costs of such action together with reasonable attorney's fees.

"(3) Any action commenced under this subsection shall proceed as if it were an action commenced under section 4 or section 16 of the Clayton Act, except that the standards applicable to the sanctioned industry consortium shall be the requirements of this section, the regulations promulgated pursuant to subsection (h) and the charter of such consortium. The remedies provided in this subsection shall be the exclusive remedies available to a plaintiff.

"(4) Any action under paragraph (1) shall be brought within 2 years of the discovery of the facts indicating that the sanctioned industry consortium has failed to comply with the requirements of this section, the regulations promulgated pursuant to subsection (h), or the charter of such consortium, but not later than 4 years from the date the cause of action arises.

"(5) In any action brought under paragraph (l), there shall be a presumption that the activities of a sanctioned industry consortium which are within the scope and limitations of its charter comply with the requirements of this section.

"(6) In any action brought under paragraph (l), if the court finds that the challenged conduct was undertaken by the sanctioned industry consortium within the scope and limitations of its charter, the requirements of this section, and the regulations promulgated pursuant to subsection (h), the court may award to the person against whom the claim is brought the cost of defending such claim (including reasonable attorney's fees).".

SEC 126. EXEMPTION FROM ADMINISTRATIVE PROCEDURE ACT.

Section 709 of the Defense Production Act of 1950 (50 U.S.C. App. 2159) is amended to read as follows:

"SEC. 709. EXEMPTION FROM ADMINISTRATIVE PROCEDURE ACT.

"Any rule, regulation, order, or amendment thereto promulgated under the authority of this Act shall not be subject to the requirements of sections 551 through 559 of title 5, United States Code. Each proposed rule or regulation, and each amendment thereto, shall be published for public comment in the Federal Register in conformity with the requirements of section 22 of the Office of Federal Procurement Policy Act (41 U.S.C. 418b) and chapter 6 of title 5, United States Code.".

SEC 127. AUTHORITY TO REVIEW CERTAIN MERGERS, ACQUISITIONS AND TAKEOVERS.

Section 721 of the Defense Production Act of 1950 (50 U.S.C. App. 2170) is amended by striking subsection (d)(1) and inserting the following:

"(1) there is evidence that leads the President to believe that completion of the foreign merger, acquisition, or takeover may threaten to impair the national security, and".

PART D—TECHNICAL AMENDMENTS

SEC. 131. PRIORITIES IN CONTRACTS AND ORDERS.

Section 101 of the Defense Production Act of 1950 (50 U.S.C. App. 2071) is amended—

(a) in subsection (a)(2) by striking "allocate materials and facilities" and inserting "materials, services, and facilities";

(b) in subsection (c)(1) by striking "supplies of materials and equipment" and inserting "materials, equipment, and services";

(c) by striking paragraphs (2) and (3) and inserting the following new paragraph:

"(2) The authority granted by this subsection may not be used to require priority performance of contracts or orders, or to control the distribution of any supplies of materials, service, and facilities in the marketplace,

unless the President submits to the Congress a finding that—

"(A) such materials, services, and facilities are scarce, critical, and essential—

"(i) to maintain or expand exploration, production, refining, transportation,

"(ii) to conserve energy supplies; or

"(iii) to construct or maintain energy facilities; and

"(B) maintenance or expansion of exploration, production, refining, transportation, or conservation of energy supplies or the construction and maintenance of energy facilities cannot reasonably be accomplished without exercising the authority specified in paragraph (1) of this subsection."; and

(d) by redesignating paragraph (4) as paragraph (3).

SEC. 132. LOAN GUARANTEES.

Section 301(e)(2)(B) of the Defense Production Act of 1950 (50 U.S.C. App. 2091(e)(2)(B)) is amended by striking "and to the Committees on Banking and Currency of the respective Houses" and inserting "and to the Committee on Banking, Housing, and Urban Affairs of the Senate and the

Committee on Banking, Finance and Urban Affairs of the House of Representatives".

SEC. 133. INVESTIGATIONS; RECORDS; REPORTS; SUBPOENAS.

Section 705 of the Defense Production Act of 1950 (50 U.S.C. App. 2155) is amended—

(1) in subsection (a), by striking "subpena" and inserting "subpoena";

(2) by redesignating subsections (c), (d), (e), and (f) as subsections (b), (c), (d), and (e), respectively;

(3) in subsection (c) (as redesignated by paragraph (2)), by striking "$1,000" and inserting "$10,000"; and

(4) in subsection (d) (as redesignated by paragraph (2)), by striking all after the first sentence.

SEC. 134. EMPLOYMENT OF PERSONNEL.

Section 710 of the Defense Production Act of 1950 (50 U.S.C. App. 2160) is amended—

(1) in subsection (b), by striking paragraph (6), and inserting the following:

"(6)(A) The departmental Secretary or an agency head making the appointment shall publish a notice in the Federal Register including the name of the appointee, the employing department or agency, the title of the position to which such individual is being appointed, the name of such individual's employer when

selected for appointment, and a statement that the individual has made a filing in accordance with subparagraph (B) which is available for inspection.

"(B) Each individual selected for appointment under the authority of this subsection shall furnish to the departmental Secretary or agency head making the appointment—

"(i) a list of the names of each corporation, partnership, or other business in which such individual has an interest, and

"(ii) a list of any financial interest such individual had during the 60-day period preceding such appointment, including any office or directorship held in a corporation.

"(C) Each individual shall submit the information described in subparagraph (B) annually on the anniversary of such individual's appointment.";

(2) in paragraph (7) of subsection (b)—

(A) by striking "Chairman of the United States Civil Service Commission" and inserting "the Director of the Office of Personnel Management";

(B) by striking "Joint Committee on Defense Production"; and

(3) in paragraph (8) of subsection (b), by striking "transportation and not to exceed $15 per diem in lieu of subsistence while away from their homes and regular places of business pursuant to such appointment" and inserting "reimbursement for travel, subsistence, and other necessary expenses incurred by them in carrying out the functions for which they were appointed in the same manner as persons employed intermittently in the Federal Government are allowed expenses under section 5703 of title 5, United States Code".

SEC. 135. AUTHORIZATION OF APPROPRIATIONS.

Section 711(a)(1) of the Defense Production Act of 1950 (50 U.S.C. App. 2161) is amended by striking "Bureau of the Budget" and inserting "Office of Management and Budget".

PART E—REPEALERS AND CONFORMING AMENDMENTS

SEC. 141. SYNTHETIC FUEL ACTION.

Section 307 of the Defense Production Act of 1950 (50 U.S.C. App. 2097) is repealed.

SEC. 142. VOLUNTARY AGREEMENTS AND PLANS OF ACTION FOR INTERNATIONAL AGREEMENTS FOR INTERNATIONAL ALLOCATION OF PETROLEUM PRODUCTS AND RELATED INFORMATION SYSTEMS.

Section 708A of the Defense Production Act of 1950 (50 U.S.C. App. 2158a) is repealed.

SEC. 143. AUTHORIZATION OF APPROPRIATIONS.

Section 711 of the Defense Production Act of 1950 (50 U.S.C. App. 2161) is amended—

(1) by striking subsection (b),

(2) by striking "(a)(1) Except as provided in paragraph (2) and paragraph (4)" and inserting "(a) Except as provided in subsection (c)",

(3) by striking in subsection (a) in the parenthetical "and for the payment of interest under subsection (b) of this section", and

(4) by striking paragraph (2) and redesignating paragraph (3) as subsection (b), and

(5) by striking subparagraph (B) of paragraph (4) and redesignating paragraph (4)(A) as subsection (c).

SEC. 144. JOINT COMMITTEE ON DEFENSE PRODUCTION.

Section 712 of the Defense Production Act of 1950 (50 U.S.C. App. 2162) is repealed.

SEC. 145. PERSONS DISQUALIFIED FOR EMPLOYMENT.

Section 716 of the Defense Production Act of 1950 (50 U.S.C. App. 2165) is repealed.

SEC. 146. FEASIBILITY STUDY ON UNIFORM COST ACCOUNTING STANDARDS; REPORT SUBMITTED.

Section 718 of the Defense Production Act of 1950 (50 U.S.C. App. 2167) is repealed.

SEC. 147. NATIONAL COMMISSION ON SUPPLIES AND SHORTAGES.

Section 720 of the Defense Production Act of 1950 (50 U.S.C. App. 2169) is repealed.

PART F—REAUTHORIZATION OF SELECTED PROVISIONS

SEC. 151. AUTHORIZATION OF APPROPRIATIONS.

Section 711(c) of the Defense Production Act of 1950 (as amended by section 143 of this Act) is amended to read as follows:

"(c) There is authorized to be appropriated for fiscal years 1990, 1991, 1992, and 1993 not to exceed $250,000,000 to carry out the provisions of sections 301, 302, and 303 of this Act.".

SEC. 152. SUNSET.

Section 717 of the Defense Production Act of 1950 (50 U.S.C. App. 2166) is amended to read as follows:

"SEC. 717. SUNSET.

"(a)(1) Sections 101, 102, 103, 105, and 106 of this Act, and all authority conferred thereunder, shall terminate at the close of September 30, 1993.

"(2) Sections 301, 302, 303, 304 of this Act, and all authority conferred thereunder, shall terminate at the close of September 30, 1993.

"(3) Sections 701, 702, 703, 704, 705, 706, 707, 708, and 711 of this Act, and all authority conferred thereunder shall terminate at the close of September 30, 1993.

"(4) Section 104 of title II, and title VI of this Act, and all authority conferred thereunder, shall terminate at the close of June 30, 1953.

"(5) Title IV and title V of this Act, and all authority conferred thereunder, shall terminate at the close of April 30, 1953.

"(6) Except as otherwise provided, all other provisions of this Act, and all authority conferred thereunder, shall remain in effect.

"(b) The termination of any section of this Act, or any agency or corporation utilized under this Act shall not affect the disbursement of funds under, or the carrying out of, any contract, guarantee, commitment or other obligation entered into pursuant to this Act prior to the date of such termination, or the taking of any action necessary to preserve or protect the interests of the United States in any amounts

advanced or paid out in carrying on operations under this Act, or the taking of any action (including the making of new guarantees) determined by a guaranteeing agency to be necessary to accomplish the orderly liquidation, adjustment or settlement of any loans guaranteed under this Act, including actions considered necessary to avoid undue hardship to borrowers in reconverting to normal civilian production; and all of the authority granted to the President, guaranteeing agencies, and fiscal agents under section 301 of this Act shall be applicable to actions taken pursuant to the authority contained in this subsection.".

TITLE II—ADDITIONAL PROVISIONS TO IMPROVE INDUSTRIAL PREPAREDNESS

PART A--INDUSTRIAL CAPABILITY AND NATIONAL SECURITY

SEC. 201. INDUSTRIAL CAPABILITIES COMMITTEE.

(a) ESTABLISHMENT.—The President shall promptly establish, through the issuance of an executive order or such other means as may be appropriate, an Industrial Capabilities Committee or other appropriate forum, to exercise the responsibilities described in subsection (b).

(b) RESPONSIBILITIES.—The forum established pursuant to subsection (a) shall exercise the following responsibilities, in addition to such others as the President may assign,:

(1) Analyze, on an ongoing basis, the demands to be placed upon industry by the national defense plans and industry's capabilities to fulfill those expectations in peacetime as well as in time of war or national emergency.

(2) Review major Government policies and their impact on the defense industrial and technology base.

(3) Develop a process for periodic industry-wide assessment of technological advancement and production capabilities in relation to national security objectives.

(4) Review existing industrial policy objectives, laws, and regulations, and recommend to the President modifications that foster industrial innovation, modernization, and productivity.

(5) Develop proposals for selectively expanding national defense production to respond to graduated levels of mobilization.

SEC. 202. INTEGRATION OF NATIONAL SECURITY POLICY AND NATIONAL ECONOMIC POLICY.

It is the sense of the Congress that—

(1) the national security of the United States would benefit from greater integration of national economic policies (including tax and trade) and national security policies; and

(2) such objective would be fostered by—

(A) designating the Secretary of Defense as a member of the Economic Policy Council, and

(B) establishing a Defense Working Group within the President's Economic Policy Council.

SEC. 203. ASSESSING INDUSTRIAL RESPONSIVENESS CAPABILITIES.

It is the sense of the Congress that, from time to time, the President should conduct of one or more exercises to assess the capability of the defense industry's capability to respond to increased demands for defense material and services under various graduated mobilization response conditions.

PART B—ENCOURAGING IMPROVEMENT OF THE DEFENSE INDUSTRIAL BASE

SEC. 211. ENCOURAGEMENT OF INVESTMENT IN ADVANCED MANUFACTURING TECHNOLOGY AND PROCESSES.

The President, acting through the Administrator for Federal Procurement Policy, shall prescribe an acquisition policy that encourages contractors to invest in advanced manufacturing technology, advanced production equipment, and advanced manufacturing processes. Such policy shall provide for—

(1) an increased allowance for profit under a contract if the contractor, a subcontractor, or a supplier invests in any such advanced technology, equipment, or process in connection with the performance of such contract; and

(2) assignment of increased weight to source selection criteria relating to the efficiency of production.

SEC. 212. RECOGNITION OF MODERNIZED PRODUCTION SYSTEMS AND EQUIPMENT IN CONTRACT AWARD AND ADMINISTRATION.

(a) IN GENERAL.—The President, acting through the Administrator for Federal Procurement Policy, shall prescribe an acquisition policy requiring, to the maximum extent practicable, that the acquisition plan for any major system acquisition, or any other acquisition program designated by the Secretary or agency head responsible for such acquisition, provide for contract solicitation provisions which encourage competing offerors to acquire for utilization in the performance of the contract modern industrial facilities and production systems (including hardware and software), and other modern production equipment, that increase the productivity of the offerors and reduce the costs of production.

(b) AUTHORIZED SOLICITATION PROVISIONS.—Contract solicitation provisions referred to in subsection (a) may include any of the following provisions:

(1) An evaluation advantage in making the contract award determination.

(2) An increase of not more than 10 percent in the amount which would otherwise be reimbursable to a contractor as the Government's share of costs incurred for the acquisition of production special tooling, production special test equipment, and production special systems (including hardware and software) for use in the performance of the contract.

(3) A provision for the contractor to share in any demonstrated cost savings that are attributable to increased productivity resulting from the following contractor actions not required by the contract—

(A) the acquisition and utilization of modern industrial facilities and production systems (including hardware and software), and other modern production equipment, for the performance of the contract; or

(B) the utilization of other manufacturing technology improvements in the performance of the contract.

SEC. 213. SUPPORT FOR THE DEVELOPMENT AND APPLICATION OF CRITICAL TECHNOLOGIES.

The President, acting through the Administrator for Federal Procurement Policy, shall prescribe an acquisition

policy authorizing a departmental secretary or agency head to restrict to domestic sources the competition for all or a portion of a contract opportunity to fulfill the requirements for materials, components, or items of supply that are the products of, or are manufactured through the application of a critical technology as defined in section 702 of the Defense Production Act of 1950 (50 U.S.C. App. 2152). Each procurement restricted pursuant to this subsection shall be justified on a case-by-case basis. Such procurements shall represent not more than the minimum aggregate quantity necessary to sustain at least one domestic source determined to be essential to national security.

SEC. 214. PROCUREMENT OF CRITICAL ITEMS OF SUPPLY.

(a) MAINTAINING DOMESTIC SOURCES.—The President, acting through the Administrator for Federal Procurement Policy, shall prescribe an acquisition policy authorizing a departmental secretary or an agency head to make a noncompetitive contract award pursuant to the authority provided in section 2304(c)(3)(A) of title 10, United States Code, or section 303(c)(3)(A) of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 253(b)(3)(A)), as appropriate, for the procurement of any critical item of supply from a domestic source in order to maintain at least one domestic source determined to be essential to national security. The requirements of section 2304(f) of title 10, United States

Code, or section 303(f) of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 253(f)) shall apply to a contract awarded pursuant to this subsection.

(b) SUBCONTRACTING.—The President, acting through the Administrator for Federal Procurement Policy, shall prescribe an acquisition policy requiring that the solicitation for the procurement of any major system, or such other procurements as may be specified in accordance with such acquisition policy, shall—

(1) specify the minimum percentage of the total estimated value of the contract that is to be performed by one or more domestic firms;

(2) provide for the attainment of such requirement by the firm as prime contractor, or by subcontractors pursuant to a subcontracting plan submitted with the firm's offer;

(3) specify that a source selection factor relating to the requirement specified in subparagraph (A) shall accord—

(A) such source selection factor a value not to exceed 10 percent of the total evaluation points for all source selection factors specified in the solicitation; and

(B) such evaluation points in proportion to the extent to which each offer meets or exceeds the specified percentage;

(4) provide that attainment of the percentage specified in the offer of the firm receiving the award shall be a material element of contractual performance; and

(5) require the contractor to—

(A) identify, at the conclusion of contract performance, each subcontractor whose performance is to be counted towards attainment of the contractual requirement specified pursuant to paragraph (1); and

(B) provide prompt notice to the contracting officer after replacing any such subcontractor.

(c) CRITICAL ITEMS OF SUPPLY.—The President, acting through the Secretary of Defense, shall—

(1) determine, for the purposes of this section, the items of supply that are critical items; and

(2) publish a list of such critical items in the Federal Acquisition Regulation.

PART C—UNFAIR FOREIGN COMPETITION

SEC. 221. EVALUATION OF OFFERS FROM SOURCES OTHER THAN DOMESTIC SOURCES.

(a) IN GENERAL.—The President, acting through the Administrator for Federal Procurement Policy, shall prescribe an acquisition policy for evaluating contract offers received from nondomestic sources with respect to a price advantage such nondomestic source may have over a domestic source as a result of any unfair advantage. The policy shall provide for the application of price evaluation factors to the offers of such nondomestic sources when necessary to counter any such unfair advantage.

(b) DEFINITION.—As used in this section, the term "unfair advantage" means—

(1) direct or indirect subsidization of a nondomestic source by a foreign government or other foreign entity; or

(2) exemption of a nondomestic source from the application of a statute, regulation, or executive order of the United States relating to environmental protection, fair labor standards, or subcontracting participation by small business concerns and small business concerns owned and controlled by socially and economically disadvantaged individuals and members of other designated groups, applicable to domestic sources.

SEC. 222. DISCOURAGING UNFAIR TRADE PRACTICES.

(a) SUSPENSION OR DEBARMENT AUTHORIZED.—A finding that a contractor has engaged in an unfair trade practice, as defined in subsection (b), shall indicate a lack of business integrity or business honesty that seriously and directly affects the responsibility of the contractor to perform any contract awarded by the Federal Government or perform a subcontract under such a contract. Such contractor shall be subject to suspension and debarment in accordance with subpart 9.4 of title 48, Code of Federal Regulations (or any successor regulation).

(b) DEFINITIONS.—For purposes of this section, the term "unfair trade practice" means the commission of any of the following acts by a contractor:

(1) An unfair trade practice, as determined by the International Trade Commission.

(2) A violation of any agreement of the Coordinating Committee on Export Controls or any similar bilateral export control agreement, as determined by the Secretary of Commerce.

(3) A false certification concerning the foreign content of an item of supply, as determined by the Secretary of the department or the head of the agency to which such certificate was furnished.

TITLE III—AMENDMENTS TO RELATED LAWS

SEC. 301. PROCEEDS FROM SALE OF EXCESS INDUSTRIAL PLANT EQUIPMENT AND FACILITIES.

Section 204 of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 485) is amended—

(1) by amending subsection (a) to read as follows:

"(a) DISPOSITION OF RECEIPTS.—All proceeds under this subchapter from any transfer of excess property to a Federal agency for its use, or from any sale, lease, or other disposition of surplus property shall be covered into the Treasury as miscellaneous receipts, except as provided in subsections (b), (c), (d), (e), and (h) of this section."; and

(2) by adding at the end the following new subsection:

"(h) CREDIT TO DEFENSE PRODUCTION ACT FUND ON CERTAIN TRANSACTIONS.—Where the property transferred or disposed of was industrial plant equipment or production facilities determined by the Secretary of Defense to be no longer required for mobilization of the defense industrial base, the costs of disposal or transfer of such equipment or facilities may be paid from the proceeds of such disposition or transfer and the net proceeds of the disposition or transfer shall be covered into the Defense Production Act Fund, established

pursuant to section 304 of the Defense Production Act of 1950 (50 U.S.C. App. 2094).".

SEC. 302. STOCKPILING OF CRITICAL COMPONENTS.

Section 12(1) of the "Strategic and Critical Materials Stock Piling Act" (50 U.S.C. 98h–3(1)) is amended to read as follows:

"(1) The term 'strategic and critical materials' means—

"(A) materials that (i) would be needed to supply the military, industrial, and essential civilian needs of the United States during a national emergency, and (ii) are not found or produced in the United States in sufficient quantities to meet such needs, and

"(B) components of major weapon systems, or other items of military equipment, essential to the production, repair, maintenance, or operation of such systems or equipment, which the Secretary of Defense determines are not produced in the United States or Canada in sufficient quantities to meet defense mobilization needs, and must be stockpiled in order to most effectively meet such mobilization needs.".

TITLE IV—EFFECTIVE DATES

SEC. 401. EFFECTIVE DATES.

(a) Except as provided in subsection (b), the provisions of this Act shall take effect on September 30, 1989.

(b) The acquisition policies required by sections 214 and 221 of the Act shall be promulgated within 180 days. Such policies shall apply to solicitations issued 60 days after the promulgation of procurement regulations implementing such acquisition policies.